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IMPLEMENTATION OF THE 1996 SAFE DRINKING WATER ACT AMENDMENTS AND FUNDING OF STATE DRINKING WATER PROGRAMS

HEARING

BEFORE THE

SUBCOMMITTEE ON
HEALTH AND ENVIRONMENT

OF THE

COMMITTEE ON COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTH CONGRESS

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CONTENTS

Page

Testimony of:

Fox, J. Charles, Assistant Administrator for Water, Environmental Protection Agency 15

Gloriod, Terry L., President, Illinois American Water Company 74

Guerrero, Peter F., Director, Environmental Protection Issues, General Accounting Office; accompanied by Helen Crocker, Principal Investigator on the GAO Report 7

Neukrug, Howard, Director, Office of Watersheds, Philadelphia Water Department, on behalf of American Water Works Association, accompanied by Alan Roberson, Director of Regulatory Affairs, American Water Works Association 49

Olson, Eric D., Senior Attorney, Natural Resource Defense Council 67

Rutherford, Jay L., Director, Water Supply Division, Vermont Department of Environmental Conservation 40

Tippin, David L., Director, Tampa Water Department 62

Material submitted for the record by:

Association of California Water Agencies, prepared statement of 94

IMPLEMENTATION OF THE 1996 SAFE DRINKING WATER ACT AMENDMENTS AND FUNDING OF STATE DRINKING WATER PROGRAMS

TUESDAY, SEPTEMBER 19, 2000

HOUSE OF REPRESENTATIVES,
COMMITTEE ON COMMERCE,
SUBCOMMITTEE ON HEALTH AND ENVIRONMENT,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:05 a.m., in room 2322, Rayburn House Office Building, Hon. Michael Bilirakis (chairman) presiding.

Members present: Representatives Bilirakis, Deal, Bilbray, Bryant, Brown, Green, and Capps.

Staff present: Joe Stanko, majority counsel; Nandan Kenkeremath, majority counsel; Robert Simison, legislative clerk; and Dick Frandsen, minority counsel.

Mr. BILIRAKIS. The hearing will come to order.

Good morning. I want to welcome all of our witnesses to today's hearing on implementation of the 1996 State Drinking Water Act Amendments and funding for State drinking water programs.

This hearing is a continuation of the subcommittee's review of the 1996 amendments. In October 1998, we held our first implementation hearing on the 1996 amendments covering a range of issues, from initial allocations to the State Revolving Fund, or SRF as we fondly call it, to the process for promulgating new contaminant regulations.

In October of last year we continued the subcommittee's review of the 1996 amendments, focusing on the research efforts which lie at the heart of new drinking water regulations.

Today's hearing will continue our broad review of implementation activities pursuant to the 1996 amendments, but will also focus on funding for State programs. We will receive testimony from the General Accounting Office, which has conducted an extensive review of the available Federal resources for State programs, how much States have actually spent for implementation activities, and what effect future funding levels could have on the ability of States to implement drinking water programs.

Under the Safe Drinking Water Act, States are responsible for the day-to-day activities which ensure the safety of our water supply. Forty-nine out of 50 States maintain primary enforcement responsibility for drinking water programs.

States conduct sanitary surveys or physical inspections of drinking water systems. They provide technical assistance. They are responsible for overseeing the monitoring of water systems, and they are required to determine the technical, managerial and financial capability of drinking water systems.

States have also developed operator certification programs, and made ongoing decisions regarding the allocation of millions of dollars in SRF loans as well as SRF grants to disadvantaged communities.

In short, States are the primary reason that the Safe Drinking Water Act actually works to protect the public.

One of the most notable findings of the GAO report, however, and there is always a however, is the fact that 75 percent of State drinking water programs believe that they have inadequate staffing, and over 90 percent project that these staffing deficiencies will continue into the future.

While the GAO report cites many factors for these shortfalls, it remains clear that the safety of our drinking water supply is as dependent on people as it is on drinking water facilities and infrastructure.

The GAO report indicates that there may be structural reasons why States have not taken full advantage of funding set-asides provided in the 1996 amendments. These include a desire not to divert funds from necessary infrastructure improvements. In effect, States may not want to rob Peter to pay Paul.

However, as the GAO report also notes, if such understaffing continues, it could eventually lead to more compliance problems and a larger enforcement workload. So clearly we need to discern the extent of this problem and what States can do to address it, as well as evaluate whether there are any changes in the set-aside system which could alleviate this condition.

We should also be very mindful that the overall burden of States is projected to increase substantially in upcoming years. In the next few years, States will be faced with new regulations for arsenic and radon, new disinfection by-product rules, new standards for previously unregulated contaminants, and possible revision of over 80 existing drinking water regulations. We must ensure this burden does not overwhelm a system that is apparently already taxed by existing obligations.

Altogether, I hope this hearing will provide valuable information for the further review of the 1996 amendments. As hard as it is to believe, we are now over halfway through the timeframe for the implementation of the 1996 amendments. Therefore, it is now time not only to look back at what has been accomplished, but to look ahead at what aspects of the law may be improved and to reauthorization 3 years hence.

The Chair now gladly yields to the gentleman from Ohio, the ranking member, Mr. Brown.

Mr. BROWN. Mr. Chairman, thank you.

Our hearing this morning provides the subcommittee with an opportunity to continue our review of the Safe Drinking Water Act Amendments of 1996.

I want to, at the outset, register my deep concern about the anti-environmental and anti-public health riders in the HUD-VA appro-

priations bills that affect the Safe Drinking Water Act. I will focus for a minute on arsenic, which can cause skin, bladder, and lung cancer. The current standard of 50 micrograms per liter was established more than 50 years ago. Virtually all experts share the view today that the current standard is not protective of human health and needs to be significantly strengthened.

Both the World Health Organization and the European Community have significantly strengthened their protective standard for arsenic in drinking water. The National Research Council in its March, 1999 report also found that the current drinking water standard for arsenic does not protect human health sufficiently and should be strengthened.

Our job in this body is to protect our water supply and to protect the public. Yet, the Republican leadership of the Committee on Appropriations has directed the EPA to "cease all actions relative to the enforcement" of the current, the weaker, the current arsenic drinking water standard. Whom are they protecting?

It is irresponsible for Congress to instruct the EPA to ignore cases in which drinking water supplies do not even achieve the current standards of 50 milligrams per liter. As the authorizing committee, we have a responsibility to take a strong stance against these appropriation riders affecting the Safe Drinking Water Act.

One of the most important provisions in the 1996 amendments is the source water quality assessment program. The American Metropolitan Water Association has informed us that it is more effective and more equitable to prevent pollution in the first place than to require drinking water suppliers to install complex and costly treatment technologies. Prevention at the source also protects the environment and enhances recreational use of water sources.

One hundred million Americans are served by water systems using ground water as the primary source. Twenty million more Americans use private wells fed by ground water. Every State has obtained source water assessments set-aside funding totaling $112 million nationwide.

Today I look forward to hearing whether local source water assessment programs have actually progressed to the point where boundaries of the assessment areas are delineated and the origins of the contaminants fully identified.

The estrogenic substances screening program is another important health provision that was added in the Safe Drinking Water Act and the Federal Food, Drug, and Cosmetic Act in 1996. The endocrine disrupter screening program, which was also authorized in the Food Quality Protection Act, will help us identify synthetic chemicals that affect the body's hormonal system.

As a member from the Great Lakes region, where endocrine disrupters and other systemic pollutants have become concentrated to a greater degree than any other region, I look forward to involvement of the Office of Water in this program.

I welcome all of our witnesses today. Thank you, Mr. Chairman.

Mr. BILIRAKIS. I thank the gentleman for his opening statement.

Mr. Bilbray.

Mr. BILBRAY. Thank you, Mr. Chairman.

I want to thank you for holding this hearing, and I want to thank you for actually allowing us to air this study that you and I and Mr. Lazio and Mr. Bliley specifically requested.

Mr. Chairman, I guess I come here after 20 years of working at the local level of actually providing the infrastructure that those of us in Washington talk about so much nowadays. I think too often those of us in Washington forget that infrastructure is not just the buildings and pumps and pipes essential to the operation, but as the part of the infrastructure it is our men and women, bone and blood, that actually make the pipes and the concrete and the steel work.

One of the things we have really been able to identify with this study, this report, is the fact that where we focus so often on the things of infrastructure, we forget about the people. This report is a great indicator that we need to be proactive. It is an opportunity and a challenge for us to be proactive and recognize that we can build all the treatment plants and all the infrastructure in the world, but if we do not have the human component available to be able to operate them in a safe and efficient manner, it will be a disaster.

Let me just sort of open my heart up and say, as somebody who has grown up on the Mexican border and seen what has happened when people are not trained properly, when operational integrity is not a high priority, you see environmental disaster after environmental disaster and people shrugging their shoulders and saying, well, you are right, we turned the wrong valve, or we did not operate that pump, or we made a mistake. But after all, I am not trained to be able to do that. I am not being paid that much. I really do not have the expertise to run this type of plant. You can't blame me.

I think this is a great example of where we have looked down at our crystal ball and we see that we are going to have great, huge temples to quality water but we may not have any priests and priestesses in there to operate it.

I just ask us to take a look at this, both Democrats and Republicans, to take this as an opportunity and challenge to show how we can take the theory of the Safe Drinking Water Act and make it a reality in the United States, even in the Great Lakes region.

I yield back.

Mr. BILIRAKIS. I thank the gentleman.

The gentleman from Tennessee, who I guess maybe attends our hearings more so than virtually any other member, and the Chair very much appreciates that.

Mr. BRYANT. Thank you, Mr. Chairman, for that recognition, and thank you also for this hearing.

I assume that with unanimous consent, any statement that I might want to add, I can do that.

Mr. BILIRAKIS. Yes.

Mr. BRYANT. I have no opening statement.

Mr. BILIRAKIS. Without objection, the opening statement of all members of the subcommittee will be made part of the record.

[Additional statements submitted for the record follow:]

PREPARED STATEMENT OF HON. CLIFFORD STEARNS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Thank you, Mr. Chairman, for having this hearing. Four years have passed since the 1996 Safe Drinking Water Act Amendments were signed into law. I remember working on that legislation—our goal at that time was to give states and governments greater flexibility to combat contaminants in local water systems. The debate at the time was not whether we all shared the goal of safe drinking water—of course we all do. Instead, we asked whether the best way to achieve that goal was with counterproductive rules, or with state and local responsibility. The answer was clear.

Therefore, we rewrote and modernized the SDWA. We gave money to a state revolving loan fund (SRF) to help public water systems to comply with the SDWA requirements. Additionally, we updated the EPA systems for identifying new contaminants for regulation.

Now it is time to look back and evaluate the success of our actions. We need to ask if the state revolving fund provides enough money for public water systems to comply with the SDWA. We also must ask if state revolving funds are sufficient to aid the states in implementing the SDWA. If the funds are sufficient now, could they become insufficient in the near future with compliance changes?

Another concern I have is the funding for on-site rural community tech assistance in the Safe Water Drinking Water Act. I believe this should be a priority in the EPA budget. Small rural communities often have difficulty complying with SDWA requirements due to limited budgets and technical expertise. We need to ensure environmental funding is spent in the most efficient and effective manner possible. It has been documented that rural water programs have resulted in more compliance and more ground water protection programs than the alternated top-down EPA approach.

I hope to learn from our panel the environmental and financial position of the Safe Drinking Water Act. We worked hard on these revisions four years ago and I look forward to ensuring the program's continued success. I thank the Chairman for holding this hearing and I yield back.

PREPARED STATEMENT OF HON. BRIAN P. BILBRAY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Chairman, thank you very much for calling this important hearing. As a Member of this Health and Environment Subcommittee, and also of the Water Infrastructure Caucus, I appreciate your providing us with this opportunity as we continue to examine the important issues surrounding our national drinking water systems.

One of my proudest moments to date as a Member of Congress was my close involvement with the crafting and passage of the Safe Drinking Water Act Amendments of 1996. Among other key provisions, we established a $9 billion dollar Safe Drinking Water Revolving Fund, and dramatically improved the process by which EPA reviews existing drinking water standards, by requiring EPA to use the best available science, and to focus specifically on contaminants which pose the greatest health risk.

Last year, I joined with Chairman Bilirakis, Chairman Bliley, and my colleague from New York Rick Lazio to request that GAO specifically review the state implementation of the 1996 Amendments, spending levels, and estimated "needs." Clearly, one of the goals contemplated in the 1996 Amendments was for states to be able to effectively implement and operate these drinking water programs, and so the timing of this hearing is very important in our oversight of the Act,

One element of the GAO report which was of particular concern to me was the finding that over 90% of the states surveyed predicted that their staffing levels would be less than adequate in the future, as new program requirements and regulations take effect. Clearly, the ability to successfully operate the appropriate equipment is critical to maintaining and improving the drinking water provided to American citizens.

I look forward to hearing more and learning from our witnesses at the hearing today about these important questions, and working with my colleagues and these stakeholders to help provide the answers that will ensure the safety of America's drinking water into this new century. Mr. Chairman, I would also ask unanimous consent that the statement from the Association of California Water Agencies be placed in the hearing record at the appropriate point.

Thank you and I yield back the balance of my time.

PREPARED STATEMENT OF HON. TOM BLILEY, CHAIRMAN, COMMITTEE ON COMMERCE

I first want to thank Chairman Bilirakis for holding today's hearing. This hearing is the third in a series of hearings which the Subcommittee has conducted concerning the 1996 Safe Drinking Water Act Amendments and the implementation of this far reaching law.

This hearing will examine several issues. First, a new report from the General Accounting Office which examined funding for state drinking water programs. This report indicates that while current funding streams may be adequate in theory, in the real world, there are some problems and challenges ahead for funding and staffing the programs.

Seventy-five percent of states reported to GAO that their staffing levels don't meet the requirements of the Act. Moreover, over *ninety percent* of states think that these staffing problems will continue. Since states are at the front lines in ensuring the quality of drinking water—this is a worrisome condition.

In 1996, this Committee provided an increase in federal grants for state drinking water programs and funded a new $9.6 billion dollar State Revolving Fund. The GAO report appears to indicate that these funds have been, to date, adequate for projected needs. But the GAO report also indicates that there could be problems down the road. We need to get to the bottom of this.

Second, this hearing will examine overall burdens on the states. As we know from the Subcommittee's previous hearings, a number of new requirements will take effect over the next five years, namely on radon and arsenic. In the near future, a new "disinfection by-products" rule is required. EPA must also review a slew of new contaminants, plus reevaluate standards for over 80 existing drinking water contaminants.

I believe federal requirements must be based on sound science, realistic examination of costs and benefits and common sense implementation. After all, it is the states that work hard to adopt and enforce new requirements.

Finally, this hearing will serve as a status check on just how well the 1996 Amendments are working. When the Amendments were signed into law in August 1996, Congress and the Administration shared a vision of revitalizing an outdated law while improving protection of the public health. This Committee and its Members worked tirelessly to secure passage of this major environmental and public health legislation. This hearing, then, serves to examine whether the promise of 1996 is indeed being fulfilled.

I look forward to receiving the testimony of our witnesses and want to thank all members for their participation.

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

Mr. Chairman: The Safe Drinking Water Act (SDWA) is one of the most important pieces of public health legislation this country has ever enacted.

Since passage of the Act in 1974 this country has made dramatic improvements in controlling hazardous runoff into our local watersheds.

The Potomac River here in Washington is now seeing the return of fish species that were nearly wiped out in the late '70's and early '80's due to pollution.

The progress America has achieved can be improved though.

The Environmental Protection Agency (EPA), the chief federal regulator of clean water issues, needs to continue to improve their scientific collections methods.

A case in point.

The EPA has taken the lead in calling for a ban on the gasoline additive MTBE.

Incidents of MTBE contamination in California has spurred an almost hysterical drive to ban this very beneficial gasoline additive.

I, like everyone on the Subcommittee, wants to ensure our constituents are not exposed to harmful chemicals in their drinking water.

However, action already taken to reduce the presence of MTBE in drinking water is working, but I am wondering if the EPA is aware of these improvements and if their position on banning MTBE may also be changing.

Mr. Chairman, I plan to discuss this issue further with Mr. Fox during the panel discussion, but aside from this particular issue I am quite pleased with the progress America is making to clean and improve our drinking water supply.

Thank you Mr. Chairman and I yield back the balance of my time.

Mr. BILIRAKIS. That being the case, we will call the first panel to come forward. Mr. Peter Guerrero is Director of the Environ-

mental Protection Issues of the General Accounting Office, and Mr. J. Charles Fox, Assistant Administrator for Water and with the Environmental Protection Agency.

Mr. Fox, welcome. We appreciate both of you being here. Obviously, as you know, your written statement is part of the record, and we will turn this on to 5 minutes.

STATEMENTS OF PETER F. GUERRERO, DIRECTOR, ENVIRONMENTAL PROTECTION ISSUES, GENERAL ACCOUNTING OFFICE; ACCOMPANIED BY HELEN CROCKER, PRINCIPAL INVESTIGATOR ON THE GAO REPORT; AND J. CHARLES FOX, ASSISTANT ADMINISTRATOR FOR WATER, ENVIRONMENTAL PROTECTION AGENCY

Mr. GUERRERO. Thank you, Mr. Chairman.

I also want to indicate with me is Ellen Crocker, the principal investigator on the report that the committee is releasing today.

We are here to discuss our report on "Drinking Water: Spending Constraints Could Affect States' Ability to Implement Increasing Program Requirements," which you are releasing today.

Ensuring an adequate supply of safe drinking water requires not only investing in the physical infrastructure, as Congressman Bilbray pointed out, but also in providing essential oversight activities performed by the States.

In recognition of the key role the States play in implementing the requirements of this act, you asked us to provide information on the following points:

First, how EPA's budget request for State program implementation compare to the amounts that are authorized and estimated to be needed; second, how much States have spent since the passage of the 1996 amendments, and how their expenditures compare with the estimated needs; third, what effects Federal funding levels have had and could have in the future on the States' ability to implement their programs; and finally, what existing practices have the potential to help States implement their drinking water programs more effectively and efficiently.

To understand these issues in context, Mr. Chairman, it is necessary to provide a brief summary of the funding available for implementing the States' drinking water programs.

In the 1996 amendments, Congress substantially increased the amount of funding authorized to help States, and did so in two regards. First, it increased funding for the public water system supervision grants from $70 million to $100 million a year. The States use these grants for a variety of activities related to implementing their programs, such as providing technical assistance to local water systems, conducting inspections, and overseeing the water systems' compliance with the requirements for testing and treating water to achieve water quality standards.

Second, the amendments authorized $9.6 billion to be appropriated to establish the drinking water revolving fund to finance infrastructure improvements at local water systems.

While the State revolving funds are primarily directed at these infrastructure types of improvements, each State, at its option, may reserve or set aside up to 31 percent of its annual allotment

to the SRF to supplement supervision grants and thus help the State meet its program responsibilities.

Although EPA does not routinely estimate the State resources needed for implementing the act's requirements, the Association of State Drinking Water Administrators has periodically developed such estimates with EPA support and participation.

According to the Association's most recent estimates, the States will need $345 million in fiscal year 1999, and that will grow to $449 million in fiscal year 2005. That is a 30 percent increase.

To answer the questions you posed, we surveyed 49 States with program primacy, and we also conducted more in-depth reviews in eight States.

In summary, Mr. Chairman, we found the following:

First, for fiscal years 1998 through 2000, EPA had requested 94 percent of the amount authorized for the supervision grants; for the same fiscal years, EPA requested about 80 percent of the amounts authorized to capitalize the States' SRF.

If the States had made the maximum use of the set-asides by reserving the full 31 percent available from the revolving fund, EPA's requested appropriations would have provided a total of $308 million in 1999 and $318 million in fiscal year 2000. These amounts, when combined with required matching funds from the States themselves, would have exceeded estimates of the needs for the two most recent years.

Second, despite the fact that the funds potentially available exceed the estimated needs, the actual State spending fell short. According to our nationwide survey of State drinking water agencies, the States' actual expenditures for implementing their programs, including expenditures of both Federal and State funds, were $214 million, $237 million, and $276 million, respectively, over the last 3 years.

In fiscal year 1999, the only year for which our data permit such a comparison, total State expenditures fell short of the estimated needs for program implementation by about 20 percent.

Our third finding is, according to our nationwide survey, that the amounts of Federal funding available for fiscal years 1997 through 1999 had less of an impact on the States' ability to implement their programs than did the effects of State-imposed spending constraints.

Over 75 percent of the States reported that their staffing levels in fiscal year 1999 were inadequate to meet the act's requirements in effect through that year. The most frequently cited reasons were authorized staffing and funding levels that were too low, hiring freezes which prevented States from filling authorized positions, and inadequate State salaries which made it difficult to attract and retain qualified staff.

In addition, while States had collectively reserved about half of the available SRF set-asides to address inadequate staffing levels, they expressed a great reluctance to do so, citing, among other things, concerns about diverting funds from needed infrastructure projects.

Because of these constraints, Mr. Chairman, States have had to scale back technical assistance and other oversight activities. According to these officials, if the situation continues it could eventu-

ally lead to further compliance problems, especially among smaller systems. Over 90 percent of the States in our survey predicted that their staffing levels would be less than adequate in the future as the number of new program requirements and complex contaminant regulations take effect.

Finally, EPA officials cited some practices that could help mitigate this resource shortfall. For example, EPA pointed to new program requirements that may increase efficiency, including those designed to assess water sources for contamination and improve the financial, technical, and managerial ability of local water systems to comply with the regulations.

However, it could take years to realize the benefits of these programs. In the meanwhile, these are exactly the programs most likely to be adversely affected by current resources limitations.

In conclusion, the amount of Federal funds potentially available to the States in the last few years appear to be adequate for meeting their estimated collective needs. However, a number of factors may impair the future ability of the States to meet the requirements of the Safe Drinking Water Act.

Most important among these is the understandable reluctance to divert funds from needed infrastructure improvements and spending constraints at the State level, resulting in staffing shortfalls.

While the eight States we contacted have been able to meet their statutory requirements in effect through this year, they have done so only by scaling back their programs and doing the minimum amount of work required. In the future, as resource needs increase with the growth in State program responsibilities, it will become imperative to address the factors that have thus far limited the States' ability to fully implement their programs.

This concludes my remarks, Mr. Chairman. I would be happy to answer any questions.

[The prepared statement of Peter F. Guerrero follows:]

PREPARED STATEMENT OF PRTER F. GUERRERO, DIRECTOR, ENVIRONMENTAL PROTECTION ISSUES, RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION, UNITED STATES GENERAL ACCOUNTING OFFICE

Mr. Chairman and Members of the Committee: We are here today to discuss our report entitled, *Drinking Water: Spending Constraints Could Affect States' Ability to Implement Increasing Program Requirements,* which you are releasing today.[1] Ensuring an adequate supply of safe drinking water requires investing not only in the physical infrastructure, such as water treatment and distribution systems, but also in essential oversight activities performed by the states, such as training water system operators and monitoring water systems' compliance with the drinking water standards promulgated by the Environmental Protection Agency (EPA). Under the Safe Drinking Water Act Amendments of 1996, the states are responsible for implementing a number of new requirements, such as ensuring that the nation's thousands of drinking water systems have the financial, managerial, and technical ability to comply with regulations and assessing the vulnerability of drinking water sources to contamination. In addition, the states must oversee their water systems' compliance with complex new regulations on specific contaminants.

In recognition of the key role that the states play in implementing the requirements of the Safe Drinking Water Act, you asked us to provide information on

- how EPA's budget requests for state program implementation compare to the amounts that are authorized and estimated to be needed;
- how much the states have spent since the passage of the 1996 amendments to implement their drinking water programs and how their expenditures compare with estimated needs;

[1] See GAO/RCED-00-199, Aug. 31, 2000.

- what effects federal funding levels have had, and could have in the future, on the states' ability to implement their programs; and
- what existing practices have the potential to help the states implement their drinking water programs more effectively and efficiently.

To understand these issues in context, Mr. Chairman, it is necessary to provide a brief summary of the funding available for implementing the states' drinking water programs. In the 1996 amendments, the Congress substantially increased the amount of funding authorized to help the states meet their responsibilities. First, the amendments authorized an increase in the funding for Public Water System Supervision grants from $70 million to $100 million annually through fiscal year 2003. The states use these supervision grants for a variety of activities related to implementing their drinking water programs, such as providing technical assistance to local water systems, conducting inspections, and overseeing the water systems' compliance with requirements for testing and treating water quality. Second, the amendments authorized $9.6 billion, to be appropriated through 2003, to establish the Drinking Water State Revolving Fund primarily for financing infrastructure improvements at local water systems. In its annual budgets, EPA requests appropriations to capitalize the states' funds and, subsequently, makes specific allotments to each state for that purpose. The states, in turn, loan these funds to their local water systems. As loans are repaid, the states' funds are replenished, and the states can make loans for other eligible drinking water projects. While the state revolving funds are primarily directed at financing local infrastructure, each state, at its option, may reserve or "set aside" up to 31 percent of its annual allotment to supplement the supervision grant and, thus, help the state meet its responsibilities in implementing its program. The states must match a portion of both the supervision grants and the moneys they set aside from their revolving funds.

Despite the significant increases in the amount of funding Congress has authorized to help states implement their programs, representatives of state drinking water programs have expressed concerns about whether they have sufficient resources to fulfill their responsibilities under the Safe Drinking Water Act. Although EPA does not routinely estimate the states' resource needs for implementing the act's requirements, the Association of State Drinking Water Administrators (ASDWA) has periodically developed such estimates with EPA's support and participation. According to ASDWA's most recent estimate, which incorporated the requirements of the 1996 amendments, the states' collective needs range from $345 million in fiscal year 1999 to $449 million in fiscal 2005.

In response to the questions you asked, Mr. Chairman, we found the following:

- In its budget requests for fiscal years 1998 through 2000, EPA requested about 94 percent of the $100 million authorized annually for supervision grants. For the same fiscal years, EPA requested, on average, 80 percent of the amounts authorized to capitalize the states' revolving funds for drinking water. If the states had made maximum use of the set-asides by reserving the full 31 percent available from the revolving fund, EPA's requested appropriations would have provided a total of $308 million in fiscal year 1999 and $318 million in fiscal year 2000 to help the states meet their responsibilities in implementing their drinking water programs. These amounts, when combined with required matching funds from the states, would have exceeded ASDWA's estimates of the states' needs.
- Despite the fact that the funds potentially available to the states exceed the estimated needs, actual state spending fell short of what was needed. According to our nationwide survey of state drinking water agencies, for fiscal years 1997 through 1999, the states' actual expenditures for implementing their drinking water programs—including expenditures of both federal and state funds—were $214 million, $237 million, and $276 million, respectively. In fiscal year 1999—the only year for which our data permit such a comparison—total state expenditures fell short of ASDWA's estimate of the amount needed for program implementation by about 20 percent.
- However, according to our nationwide survey, the amounts of federal funding available for fiscal years 1997 through 1999 had less of an impact on the states' ability to implement their drinking water programs than did the effects of state-imposed spending constraints. Over 75 percent of the states reported that their staffing levels in fiscal year 1999 were inadequate to meet the act's requirements in effect through that year. The most frequently cited reasons were (1) the states' authorized staffing and authorized funding levels were too low, (2) hiring freezes prevented the states from filling authorized positions, and (3) inadequate state salaries made it difficult to attract and retain qualified staff. In addition, about 40 percent of these respondents indicated a reluctance to use revolving fund set-asides to address inadequate staffing levels, citing, among

other things, concerns about diverting funds from infrastructure projects. Our discussions with drinking water officials from eight states disclosed that they have been able to meet most requirements in effect through fiscal year 1999, generally by scaling back technical assistance and other oversight activities or doing the minimum amount of work required. According to these officials, if this situation continues, it could eventually lead to more compliance problems, especially among small water systems, which make up the overwhelming majority of water systems. Over 90 percent of the states in our nationwide survey predicted that their staffing levels would be less than adequate in the future as a number of new program requirements and complex contaminant regulations take effect.

- Program officials in the eight states we contacted cited some management practices that could increase the efficiency of program implementation. For example, some states are taking advantage of the expertise in other state and federal agencies or associations. EPA officials pointed to new program requirements that may increase efficiency, including those designed to assess water sources for contamination and improve the financial, technical, and managerial ability of local water systems to comply with drinking water regulations. However, it could take years to realize the benefits of these programs.

BACKGROUND

The Safe Drinking Water Act of 1974 authorized EPA to give the primary responsibility for enforcing requirements of EPA's safe drinking water program—commonly referred to as "primacy"—to the states that meet certain requirements. Among the key requirements are that the states (1) adopt drinking water regulations that are no less stringent than EPA's national primary drinking water regulations and (2) adopt and implement adequate procedures to carry out the program's requirements and enforce the regulations. All states, except Wyoming, have assumed primacy for managing their drinking water programs. To assist the states in developing and implementing their own drinking water programs, the 1974 act authorized EPA to award them program supervision grants and provided that the federal funds would comprise not more than 75 percent of the cost of implementing state programs.

In addition to increasing the authorized funding for the supervision grants, the 1996 amendments authorized $9.6 billion through fiscal year 2003 to establish the Drinking Water State Revolving Fund for infrastructure improvements at local water systems. To give the states more flexibility in operating their drinking water programs, the Congress gave the states the option of setting aside up to 31 percent of their annual revolving fund allotments for certain designated activities, most of which are related to program implementation. For example, the states may set aside funds for: supervision of public water systems; technical assistance through programs designed to protect sources of drinking water; strategies to help ensure the financial, technical, and managerial capacity of water systems to provide safe drinking water; and programs to certify water system operators.

The 1996 amendments also gave the states a number of new responsibilities. For example, the amendments established new programs for assessing the vulnerability of drinking water sources to contamination and ensuring the technical, financial, and managerial viability of water systems. As these new programs are being implemented, states will also be overseeing the water systems' compliance with complex new regulations on such contaminants as arsenic and radon.

THE FUNDS POTENTIALLY AVAILABLE TO THE STATES HAVE BEEN SUFFICIENT TO COVER THEIR ESTIMATED NEEDS

For fiscal years 1998 through 2000, on average, EPA requested, as part of the President's budget, about 94 percent of the funding authorized for supervision grants in the Safe Drinking Water Act Amendments of 1996 and 80 percent of the funding authorized for the revolving fund, from which the set-asides are available. During this period, EPA's requests for the supervision grants remained constant at about $85 million while its requests for the revolving fund allotments increased, making more funds available for set-asides each year, from $212 million in fiscal year 1998 to $233 million in fiscal year 2000. (During this period, EPA received the amount it requested for both the supervision grants and the revolving fund, except for fiscal year 2000 when the appropriation for the revolving fund was $5 million less than the request.)

According to ASDWA, the total estimated needs for implementing the states' programs in fiscal years 1999 and 2000 are $345 million and $339 million, respectively. The amounts EPA requested for those years would have been more than enough to meet the states' annual needs as estimated by ASDWA if

- the states took full advantage of the available set-asides—that is, if each state set aside the maximum 31 percent for state implementation activities and provided the required matching funds—and
- the supervision grants and minimum required match were included in the total.

The funds potentially available to the states would have exceeded their estimated needs for fiscal years 1999 and 2000 by about $27 million and $44 million, respectively.

THE STATES' OVERALL SPENDING HAS FALLEN SHORT OF THEIR ESTIMATED NEEDS

According to the results of our nationwide survey, for fiscal years 1997 through 1999, the states' actual expenditures for implementing their drinking water programs—including expenditures of both federal and state funds—were $214 million, $237 million, and $276 million, respectively. We found that the states are contributing a significant share of the funding for their programs and are contributing more funding than the minimum required to meet the statutory matching provisions. Over the 3-year period, state funds were the source of 53 percent, on average, of the states' total expenditures for implementing their drinking water programs.

Although they have contributed more funds than required by the federal matching provisions, according to the data on state expenditures obtained in our survey, the states collectively may be spending less than ASDWA's estimates of the amounts needed nationwide. For example, in fiscal year 1999—the only year for which our data permit a direct comparison—the states' collective expenditures, including funds from both state and federal sources, were about 80 percent of the amount estimated to be needed for program implementation.[2] If recent trends continue over the next several years—that is, if EPA's appropriations for supervision grants and the state revolving fund remain at about their existing levels relative to the amounts authorized and states collectively continue to make use of only about half of the available set-asides—then the gap between the amounts expended and estimated to be needed could grow larger. ASDWA estimates that by fiscal year 2005 the states will need $449 million to implement their drinking water programs, an increase of about 30 percent from fiscal year 1999. Table 1 shows the projected resource needs for implementing the states' oversight programs, by year, from fiscal years 1999 through 2005.

Table 1: Resource Needs for Implementing the States' Drinking Water Programs, Fiscal Years 1999 Through 2005

Dollars in millions

Fiscal year	Full-time equivalent staff	Funding
1999	4,911	345
2000	5,020	339
2001	5,190	362
2002	5,208	374
2003	5,588	414
2004	5,755	439
2005	5,252	449

Note: The estimates do not include Wyoming or the District of Columbia. In addition, we adjusted ASDWA's estimates to exclude Puerto Rico, the U.S. Virgin Islands, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands.

Source: GAO's presentation of data from ASDWA.

FACTORS OTHER THAN FEDERAL FUNDING LEVELS AFFECT MOST STATES' ABILITY TO IMPLEMENT THEIR PROGRAMS

According to our nationwide survey and more detailed discussions with drinking water officials in eight states, for fiscal years 1997 through 1999, factors other than federal funding levels affected the states' ability to implement their drinking water programs. These factors include both state-imposed spending constraints and concerns about using funds from the revolving fund for program implementation instead of infrastructure projects. Despite these factors, program officials from all eight states we contacted told us they were able to meet most program requirements in effect through fiscal year 1999, largely by scaling back their programs and doing

[2] We collected data on how much the states spent to implement their drinking water programs for fiscal years 1997 through 1999 only; ASDWA estimated the amount of funding states would need to implement their programs for fiscal years 1999 through 2005 only.

the minimum amount of work required. For example, four states told us that they have reduced the frequency with which they conduct comprehensive inspections of water systems, called sanitary surveys. Officials from seven of the eight states indicated that over the next 5 years, increasing program responsibilities could exacerbate the effects that the states have experienced thus far.

Factors Contributing to Inadequate Staffing Levels in State Drinking Water Programs

In responding to our nationwide survey, 76 percent of the states reported that their current staffing level is less than adequate or much less than adequate to implement their drinking water programs. Among these states, the most frequently cited reasons for not having an adequate staffing level were inadequate authorized state staffing levels (76 percent), inadequate authorized state funding levels (60 percent), state-imposed hiring freezes that prevent drinking water program offices from filling authorized positions (41 percent), and inadequate state salary structures that make it difficult to attract and retain qualified staff (49 percent).

According to program officials from the eight states we contacted, state legislatures generally authorize the number of staff that state drinking water programs can hire and/or the amount of state funding the programs can receive. This can create situations in which some states have adequate authorized staffing levels to carry out program responsibilities but not enough funding to hire all of the authorized staff. Other states may have adequate funding but cannot hire anyone because they have inadequate authorized staffing levels or because there is a hiring freeze.

Five of the eight states that we looked at in-depth were experiencing problems as a result of these circumstances. For example:

- Program officials from Maine commented that even if they did receive additional federal funds, they would not be able to hire new permanent staff unless the authorized state staffing level is increased.
- A program official from Indiana said that the authorized state funding level is only enough to meet the minimum match required to obtain federal funds and estimated that the state needs to increase its total resource level by at least 50 percent.

Program officials from two of the states that we contacted attributed inadequate staffing levels in their programs in part to an inability to pay staff competitive salaries, which makes it difficult to attract and retain qualified staff. Arkansas' program had several vacancies as a result of this problem.

In addition to state-imposed spending constraints, our nationwide survey found that over 40 percent of the states that reported inadequate staffing levels attributed this situation to factors that can limit the states' use of the revolving fund set-asides to help implement their drinking water programs.[3] These factors included concerns about using the revolving fund to implement drinking water programs instead of using the money to fund infrastructure projects (41 percent) and uncertainty about the continued availability of the set-aside money from this fund after its authorization expires (43 percent). In addition, about 30 percent of the states reporting inadequate staffing levels said that an insufficient level of funding for the supervision grants was a contributing factor.

Regarding the adequacy of the funding for the supervision grants, program officials from four of the eight states we contacted said that an increase in this funding might prompt their legislatures to approve additional state funding since a small increase in state funding could be used to match a larger amount of federal dollars. Program officials from both Ohio and Utah commented that increasing the supervision grants would mean that the states would not be forced to make a choice between program implementation and infrastructure construction.

Current and Future Impact of Inadequate Staffing on the States' Ability to Implement Their Programs

Although program officials in all of the eight states we contacted maintain that they have been able to meet most of the program requirements in effect through fiscal year 1999, they have done so by (1) scaling back their programs, (2) doing the minimum amount of work required, and (3) setting formal or informal priorities among their responsibilities. For example, six of the eight states said they have had to scale back their programs by providing less technical assistance to water systems, particularly small water systems, which make up the overwhelming majority of all

[3] During fiscal years 1997 and 1998, the only years for which complete set-aside information is available, only 11 and 8 states, respectively, used the full 31 percent set-aside allowed by law. Collectively, the states reserved about two-thirds of the available set-asides in fiscal year 1997 and took less than half of the amounts available in fiscal year 1998.

public water systems. In addition, six of the eight states currently engage in some form of priority setting using such criteria as the size of the water system, the size of the population at risk, the potential health effects of a violation, and whether or not the state could lose federal funding if it did not perform an activity.

Ninety-four percent of the states in our nationwide survey predicted that their staffing levels would be less than adequate or much less than adequate as new program requirements and complex contaminant regulations take effect over the next 5 years. Similarly, officials from seven of the eight states we contacted indicated that the state-imposed constraints that currently affect their ability to implement their programs—such as inadequate state staffing and funding levels, hiring freezes, and inadequate state salary levels—will continue to compromise their programs if not addressed. In light of ASDWA's estimate that the states' resource needs will increase by about 30 percent between fiscal years 1999 and 2005, the effects experienced thus far could be exacerbated in the future.

The extent to which future spending constraints will affect the states' drinking water programs is unclear because the details of certain regulations, and hence the resulting workload on their programs, are unclear. For example, an Ohio official pointed out that the cost of implementing the arsenic regulation depends on where EPA sets the standard for this contaminant. This official said that 225 public water systems in Ohio would be affected by this regulation if the arsenic standard were set at 10 milligrams per liter while 500 systems would be affected if the standard were set at 5 milligrams per liter.

MANAGEMENT PRACTICES AND NEW REQUIREMENTS COULD ENHANCE THE EFFECTIVENESS AND THE EFFICIENCY OF THE STATES' DRINKING WATER PROGRAMS

Beyond adding more funding, one potential solution to the states' increasing responsibilities under the Safe Drinking Water Act is the adoption of management practices that improve efficiency or otherwise enhance the states' ability to implement their programs. Officials in the eight states we contacted cited efforts to improve program efficiency by adopting such new management practices as taking advantage of the expertise in other state and federal agencies or associations through contracts, interagency agreements, and partnerships. Also, the EPA officials we interviewed emphasized that new requirements to assess drinking water sources and improve water systems' ability to comply with drinking water regulations, mandated in the 1996 amendments, would likely increase the efficiency of state programs over the long term. Although these new requirements would necessitate substantial resource investments in the short term, according to EPA officials, they will eventually improve both the efficiency and effectiveness of the states' programs.

AGENCY COMMENTS ON OUR REPORT

We provided EPA with a draft of our report for its review and comment. EPA officials generally agreed with the information presented in the draft report; however, they expressed concerns in two areas. First, the officials said that the draft report did not sufficiently emphasize the impact of the increasing program requirements on the states' future resource needs. We made several changes to highlight material already in the report concerning the impact of potential state resource shortfalls on their future program implementation. Second, the EPA officials noted that our comparison of the funds potentially available to the states with the needs estimated by ASDWA could be misleading because, as our draft report indicated, most states (1) do not take the maximum amount allowed for the revolving fund set-asides and (2) actually have contributed much more than the minimum amounts required for matching the EPA-provided funds. We clarified our presentation of this comparison.

In summary, Mr. Chairman, the amounts of federal funds potentially available to the states during the last few years appears to have been adequate for meeting their estimated collective needs to date. However, a number of factors may impair the future ability of the states to meet the requirements of the Safe Drinking Water Amendments of 1996. Most important among these are the spending constraints at the state level, resulting in staffing shortfalls, and an understandable reluctance to divert revolving fund resources from needed infrastructure improvements at local water systems. While the eight states we contacted have been able to meet statutory program requirements in effect through fiscal year 1999, they have done so only by scaling back their programs and doing the minimum amount of work necessary. As the states' resource needs increase along with the growth in their responsibilities, it will become imperative to address the factors that have thus far affected the states' ability to implement their programs.

This concludes my prepared statement. I would be pleased to answer any questions you or Members of the Committee may have.

Contact and Acknowledgement

For future contacts regarding this testimony, please contact Peter F. Guerrero at (202) 512-6111. Individuals making key contributions to this testimony included Ellen Crocker, Terri Dee, Carolyn Hall, and Lisa Pittelkau.

Mr. BILIRAKIS. Thank you, Mr. Guerrero.

Mr. Fox.

STATEMENT OF J. CHARLES FOX

Mr. FOX. Thank you, Mr. Chairman. It is a pleasure to be here. I very much appreciate the committee's calling this hearing so we can have this important discussion.

Today, Americans enjoy one of the safest drinking water supplies in the world. Over 90 percent of Americans served by community water systems receive water with no reported health standard violations. However, the lesson we learned in Milwaukee is that we can never take the safety of our drinking water for granted.

High quality drinking water is a testament to the hard work and dedication of water systems throughout the country, large and small, both public and private. State officials oversee the work of local systems, and now more than ever we rely on the States to identify and fix problems and to work with local systems to assure safe drinking water for the public we all serve.

It is also important to recognize that the country would not have the high quality drinking water system we enjoy today without the leadership provided by Congress and the administration in the enactment of the 1986 amendments to the Safe Drinking Water Act.

Consistent with the goals of the 1996 amendments, the President and Vice President have dramatically increased funding for States' drinking water programs and for financing drinking water infrastructure.

In addition, EPA has established an outstanding record of success in implementing the many new and challenging authorities called for in the 1996 amendments.

For example, the agency worked with States to successfully establish State revolving loan funds for financing drinking water infrastructure improvements. The agency has also worked closely with States and a range of other stakeholders to develop a new right-to-know program, and new drinking water standards within the tight timeframes established in the 1996 amendments.

I want to publicly commend all the EPA staff that have worked so hard over the past several years to build this record of accomplishment.

My written statement describes many of our actions in more detail. I would like to highlight some of the important initiatives we have taken to strengthen public health protection.

Most scientists and drinking water systems, managers agree that the most significant threat to public health is microbial contaminants, such as E. coli or Cryptosporidium. Exposure to these contaminants can include severe infections that can last for several weeks and, in some cases, might result in death.

This spring EPA proposed the ground water rule and the long-term enhanced surface water treatment rule to address microbial health concerns to consumers. When finalized, these rules will complete a cycle of microbial protection with existing rules so all water

systems, whether big or small, whether their source water is ground water or surface water, whether public or private, have basic protections, including filtration, disinfection, and monitoring, as appropriate to the individual system.

I am also pleased to announce that on September 6 a Federal advisory committee reached agreement on the second phase of these rules. We will be issuing a formal notice in the Federal Register later this fall to begin an extensive process of collaboration with interested parties prior to future rulemaking.

Consistent with Congress' direction, EPA has also issued a proposed rule to lower the maximum contaminant level of arsenic, another high priority drinking water contaminant. It is a known carcinogen, and also linked to many known noncancer health effects.

In a March 1999 report, the National Academy of Sciences found that the current standard of 50 parts per billion does not provide adequate human health protection, and recommended that the EPA lower the MCL as quickly as possible. The agency proposed a standard of 5 parts per billion, and also asked for comments on 10 and 20 parts per billion.

I understand this proposal has significant interest, and I am happy to talk about it in greater detail later today or at any time in the future.

You asked that I also address State funding for the implementation of the 1996 amendments. I believe that by working together, Congress and the administration have, in fact, provided the resources that EPA, States, and others need to assure the effective implementation of the amendments.

Since the early 1990's, the Clinton-Gore Administration has proposed and Congress has provided dramatically increased resources for implementation grants to the States. The funding has increased almost threefold in less than 10 years from the basic implementation grant account. In addition, Congress and the administration agreed to include in the 1996 law the discretionary authority to set aside drinking water SRF funds to support State programs.

Although not all States have chosen to use the full amount of funding that is available to them, as you can see in the chart attached to my testimony, the funding available to the States since the 1996 amendments passed has almost quadrupled. I do want to note that this situation may change in coming years as workloads increase, and we urge that future administrations and future Congresses will want to pay very close attention to this situation.

In conclusion, Mr. Chairman, I am confident that the safety, security, and availability of drinking water will always be at the top of the American public's agenda. You can trust that EPA will continue to work with Congress, the States, local governments, and others to identify and develop the best mechanism to help deliver safe water that protects public health.

Thank you very much.

[The prepared statement of J. Charles Fox follows:]

PREPARED STATEMENT OF J. CHARLES FOX, ASSISTANT ADMINISTRATOR FOR WATER, U.S. ENVIRONMENTAL PROTECTION AGENCY

Thank you, Mr. Chairman, for the opportunity to address the Subcommittee today on the important work that the Environmental Protection Agency (EPA) is doing,

in cooperation with States and drinking water systems, to assure that all Americans have drinking water that is safe.

Today, Americans enjoy one of the safest drinking water supply systems in the world. Over 90% of Americans served by community water systems receive water with no reported health standard violations.

The high quality of our drinking water is a testament to the hard work and dedication of the managers and staff of water systems throughout the country—large and small, publicly owned and private—who are the first line of defense in assuring safe drinking water.

State officials oversee the work of local systems and are essential to keeping the promise of safe drinking water. Now more than ever, we rely on States to identify and fix problems and to work with local systems to ensure safe drinking water long into the future.

It is also important to recognize that the country would not have the high quality drinking water system that we enjoy today without the leadership provided by the Congress in the enactment of the 1996 amendments to the Safe Drinking Water Act (SDWA). The SDWA amendments, which the Clinton Administration played a major role in developing, invigorated the core drinking water program and provided new direction to federal, State and local governments and the drinking water community. The 1996 amendments moved us toward more comprehensive drinking water protection by:

- improving the way EPA sets drinking water safety standards based on good science and data;
- addressing some of the highest public health risks;
- expanding consumer information and involvement;
- providing over 3 billion dollars in funding for infrastructure investments for communities;
- emphasizing prevention through source water assessments, capacity development, and operator certification; and
- attending to some of the most pressing problems of small water systems.

In addition to playing a leadership role in developing the key elements of the SDWA amendments, the Administration has also dramatically increased funding for State safe drinking water programs and for financing of drinking water infrastructure.

Perhaps more important, EPA has established an outstanding record of success in implementing the many new and challenging authorities called for by the SDWA amendments—a total of some 55 new Federal responsibilities. The Agency worked with States to successfully establish State Revolving Loan Funds for financing drinking water infrastructure improvements. The Agency has worked closely with States and a range of other stakeholders to develop strong and practical new drinking water standards within the very tight timeframes established in the SDWA amendments. And, we have worked with all interested parties to improve the long-term protection of sources of drinking water. I want to publicly commend all the EPA staff who have worked so hard over the past several years to build an outstanding drinking water program.

I believe that the outstanding quality of the drinking water program we have today is the best evidence that we will be able to do even better in the coming years. We will do better in our efforts to identify contaminants of special concern. We will do better in helping communities finance needed system improvements. We will do better in planning for the long-term safety of sources of drinking water. And, we will accomplish this work hand-in-hand with State and local officials, citizens, and the Congress.

My testimony today will review some of the work we have done to implement the SDWA amendments, describe some of the funding issues that the program faces, and identify some of the challenges that we will be working on in the coming years.

SUCCESS IN MEETING SDWA MANDATES

The 1996 SDWA amendments gave the entire drinking water community, but especially EPA, new marching orders and many new challenges, including regulating high risk contaminants, improving consumer right-to-know about drinking water quality, protecting source waters, and financing system improvements.

Regulating High-Risk Contaminants

In the past two years, we have proposed or finalized a series of new rules that address microbial and other high risk contaminants in drinking water.

The Administration and Congress agree that the most significant threat to public health is microbial contamination, such as *E.coli* and *Cryptosporidium.* Adverse

health effects from exposure to microbial pathogens in drinking water are well documented. As we have seen in Milwaukee and New York—and most recently in our neighbor, Ontario, Canada—these health effects can include severe infections that can last several weeks and may result in death.

This Spring, EPA proposed the Ground Water Rule and the Long Term 1 Enhanced Surface Water Treatment Rule to address the health threats to consumers by microbial contamination in ground water systems.

When promulgated, these rules will complete a cycle of microbial protection with the Interim Enhanced Surface Water Treatment Rule, issued in 1998. Together, these rules will cover all consumers of water provided by public water systems and significantly reduce threats to human health from microbial disease.

Disinfection of drinking water to protect from microbial contamination is one of the major public health advances in the 20th century. However, the disinfectants themselves can react with naturally-occurring materials in the water to form unintended byproducts that may pose health risks. EPA's Disinfectants/Disinfection Byproducts Rule, released with the Interim Enhanced Surface Water Treatment Rule in 1998, addresses the potential health threats that may be related to the disinfection process itself. It strengthens standards for trihalomethanes, establishes new drinking water standards for seven disinfectant byproducts and three disinfectants, and requires treatment techniques to further reduce exposure to disinfection byproducts.

The risk-risk tradeoff between disinfectants and their byproducts makes decisions about treatment difficult. However, the extensive stakeholder process that EPA used to develop these complex rules has assured that the new requirements are well supported and understood.

I am pleased to announce that on September 6th, a Federal Advisory Committee—with whom the Agency has been discussing efforts on microbial contaminants, the disinfectants used to treat these contaminants, and disinfection byproducts resulting from the treatment—reached agreement on the second phase of these rules. This agreement builds on both the results of the microbial and disinfection byproducts research that is currently ongoing and a massive data collection effort on contaminant occurrence. It will strengthen and expand the human health protections provided in the rules promulgated in 1998.

In November 1999, EPA proposed the Radon Rule, which will have an important impact on reducing the human health risk from radon in drinking water as well as in indoor air from soil. Radon in indoor air is the second leading cause of lung cancer in the United States. Although the risk posed by radon from drinking water is much smaller than that from indoor air, the 1999 report from the National Academy of Sciences confirmed that radon in drinking water causes cancer.

Because of the multimedia nature of radon risk, Congress, in the SDWA Amendments, created a unique multimedia mitigation approach to allow local flexibility in addressing both risks. Our approach of an alternative maximum contaminant level and multimedia mitigation program accurately and fully reflects the 1996 SDWA amendments' provisions to protect public health, and will result in a reduction of cancer cases from both indoor air and drinking water in a cost-effective manner.

Consistent with the Congress' direction, EPA has also issued a proposed rule to lower the maximum contaminant level for arsenic, another high-priority drinking water contaminant. Arsenic is a known carcinogen and is also linked to many noncancer health effects. In a March 1999 report, the National Academy of Sciences' National Research Council found that the current, 50-year-old arsenic standard of 50 parts per billion does not provide adequate human health protection, and recommended that EPA lower the MCL as quickly as possible.

The Agency proposed a standard of 5 parts per billion and also asked for comments on 3, 10, and 20 parts per billion. Last month we held a day-long, public meeting on this proposed rule in Reno, Nevada. Over 140 people attended in person and another 40 or so joined in the discussion via telephone. While we knew there was considerable interest in this proposed rule, the attendance at this meeting serves as a good indicator that the comments submitted on this rule will be significant.

In addition, we expect a report on this proposed rule from the Agency's Science Advisory Board (SAB) in the next few weeks. This SAB assessment, as well as the numerous public comments submitted on the proposed rule, will be thoroughly evaluated as EPA develops the final regulation on arsenic.

Right-to-Know/Consumer Awareness

The Clinton Administration has a strong commitment to the right of consumers to know the quality of the water that they drink. We made expanded consumer information a top priority in the development of the SDWA amendments and have

worked hard to assure the effective implementation of new right-to-know authorities. In addition, drinking water systems are making outstanding progress in providing information to consumers.

The new "consumer confidence" reports give customers of drinking water systems the information they need to make their own health decisions. Today, approximately 253 million Americans have access to their annual consumer confidence report. Over 100 million Americans are able to read their water quality report online. These reports provide information the public is demanding.

The public also needs immediate information about drinking water health threats so they can protect themselves and their children. EPA recently completed revisions to the Public Notification Rule, which now requires faster notice in emergencies—specifically, within 24 hours. While providing for faster and clearer communication to consumers, the rule will also reduce the burden to water systems by requiring fewer notices overall and enabling water systems to better target notices to the seriousness of the risk.

Finally, EPA continues to respond to the public about drinking water issues. In 1999, EPA's Safe Drinking Water Hotline received over 10,000 calls from consumers about their water quality, most coming near the October, 1999 deadline for the first consumer confidence report. EPA's Local Drinking Water Information website is accessed over 5,000 times per month.

Preventing Contamination of Drinking Water

The 1996 SDWA amendments recognized that a robust program to prevent contamination of drinking water supplies and efforts to ensure reliable systems are necessary and cost-effective approaches to address current and emerging problems.

Effective drinking water protection has to start with an understanding of the threats to the water source. States are making significant progress in development of source water assessments. Fifty States/Territories have an EPA-approved *Source Water Assessment and Prevention Program* and are conducting assessments for the water supplies.

To support source water assessment and prevention activities, States were provided a one year only, FY1997, set-aside that allowed them to use up to10 percent of their Drinking Water State Revolving Fund allotment to support their source water delineations and assessment efforts.

The total amount available for this set-aside was approximately $124 million; all States and Territories actually set aside close to $112 million, or 90 percent of the amount available. While the set-aside itself was limited to one year, the States have four years to obligate these funds.

Preventing drinking water contamination also means that water systems must have the financial, technical, and managerial ability to meet new challenges and continue to provide safe drinking water to their consumers. As required by the 1996 SDWA amendments, EPA has developed guidance to States on both capacity development programs and programs to ensure that all water systems have access to a fully qualified operator.

All States are developing their capacity development and operator certification programs. We are optimistic that they will meet the statutory requirements and deadline so as to avoid the penalty of a 10 percent reduction for capacity development and a 20 percent reduction for operator certification from their State Revolving Loan Fund allocation in FY 2001.

Drinking Water State Revolving Fund

The Drinking Water State Revolving Fund (DWSRF) has been extremely successful in less than 4 years of operation. From its four year (FYs 97,98,99, 00) aggregate appropriations of some $3.6 billion, EPA has given out nearly $2.7 billion in revolving loan grants to all 50 States, Puerto Rico, the District of Columbia, and the Territories.

States have made over 1,200 loans totaling over $2.3 billion to water systems to address the most significant public health needs. Small water systems have been a focus of the DWSRF. Nearly three-fourths of all DWSRF loans awarded have gone to systems serving fewer than 10,000 persons.

EPA Cooperation with States and Drinking Water Systems

As EPA has implemented SDWA, we have tried to ameliorate some of the demands that the requirements place on our partners, especially the States.

We have had extensive stakeholder involvement in our actions, including a particular focus on small water systems. This has improved the quality of our rules and has resulted in increased flexibility to States and water systems.

The SDWA amendments provide the authority to accommodate the needs and concerns of small systems and to emphasize technologies as a cost-effective approach

to achieve compliance with our rules. We have worked hard to make effective use of this authority.

We have also given the regulated community advance notice of new requirements, so that they may better prepare. The new Contaminant Candidate List process that Congress added to SDWA in 1996 gives us a fair and workable way to identify and address the highest risks to public health. We will also attempt to consolidate rules by type to move away from a contaminant-by-contaminant approach to regulation.

As we develop our rules, we have taken into consideration the impacts that other rulemakings will have on the regulated community. We have tailored rules to consider local or regional considerations. We have phased implementation components where possible. We have worked to improve the capacity of water systems to meet these new requirements through early and improved technical assistance, training, outreach, and funding through the DWSRF.

Finally, we are working to lessen the pressure on water systems as the last line of defense by promoting tools for watershed and source water protection through such mechanisms as the SDWA's source water protection programs and the Clean Water Act.

FUNDING SAFE DRINKING WATER PROGRAMS

Mr. Chairman, in your letter of invitation to this hearing, you asked that I address funding for the implementation of the SDWA amendments, both now and in the future.

I am confident that, working together, Congress and the Administration have provided the resources that EPA, States, and others needed to assure the effective implementation of the SDWA amendments.

Since the early 1990s, the Clinton Administration had proposed, and Congress has provided, dramatically increased resources for Public Water Supply Supervision (PWSS) grants to the States. These grants provide support to States in their role as primary implementors of drinking water programs.

The funding for PWSS grants has increased from a level of $39.3 million in FY-90, to $72.2 million in FY 96, and almost $94.0 million in FY's 1998, 1999, and 2000—an almost threefold increase in less than 10 years. (Note that roughly 10% of PWSS funding has been used by EPA to implement drinking water programs for Territories, Tribes, and States not implementing the program.) States must match these federal funds by providing at least one dollar for every three federal dollar received, but usually provide more.

Congress and the Administration recognized that adequate funding for drinking water programs called for in the new SDWA amendments would be essential to the success of the program. We agreed to include in the new law authority for States to use some of the funds provided to them through the DWSRF to support program management activities. The authority to "set-aside" the DWSRF funds is discretionary to each State. Many States have chosen to use this new authority to supplement State funds and the federal funds available under the PWSS grant program.

I understand your question, Mr. Chairman, to be whether these various funding sources are sufficient to support implementation of the strong drinking water program called for in the SDWA amendments. I believe that the short answer to that question is "yes." At the same time, it is important to note that not all States have chosen to use the full amount of funding that is available to them. And, as the program evolves in the coming years, some funding shortfalls may develop.

I have attached to my testimony a graph that illustrates the funding increases for drinking water program implementation over the past decade.

FUTURE CHALLENGES FOR THE DRINKING WATER PROGRAM

The challenges facing the entire drinking water community are indeed daunting. Protection of drinking water safety has always required constant vigilance and a proactive approach to emerging threats. That is still the case today. We can continue to meet these challenges through the framework provided by the SDWA, but it will require concerted effort by everyone in the drinking water community.

The cost of providing safe drinking water—finding a water supply, treating the water, delivering the water, and maintaining the system—will continue to be a challenge. EPA's 1997 Drinking Water Needs Survey Report to Congress identified over $138 billion in industry needs with the vast majority of these needs targeted for delivery of water, rather than for meeting SDWA regulatory requirements. EPA is committed to working with Congress, the States, the drinking water industry, and consumers to ensure that Americans continue to receive safe, affordable drinking water into the future.

The impressive successes of drinking water systems, States, and Federal agencies in providing safe water to all Americans should not lull us into a false sense of security. This success is a result of daily efforts to address constant risks and challenges.

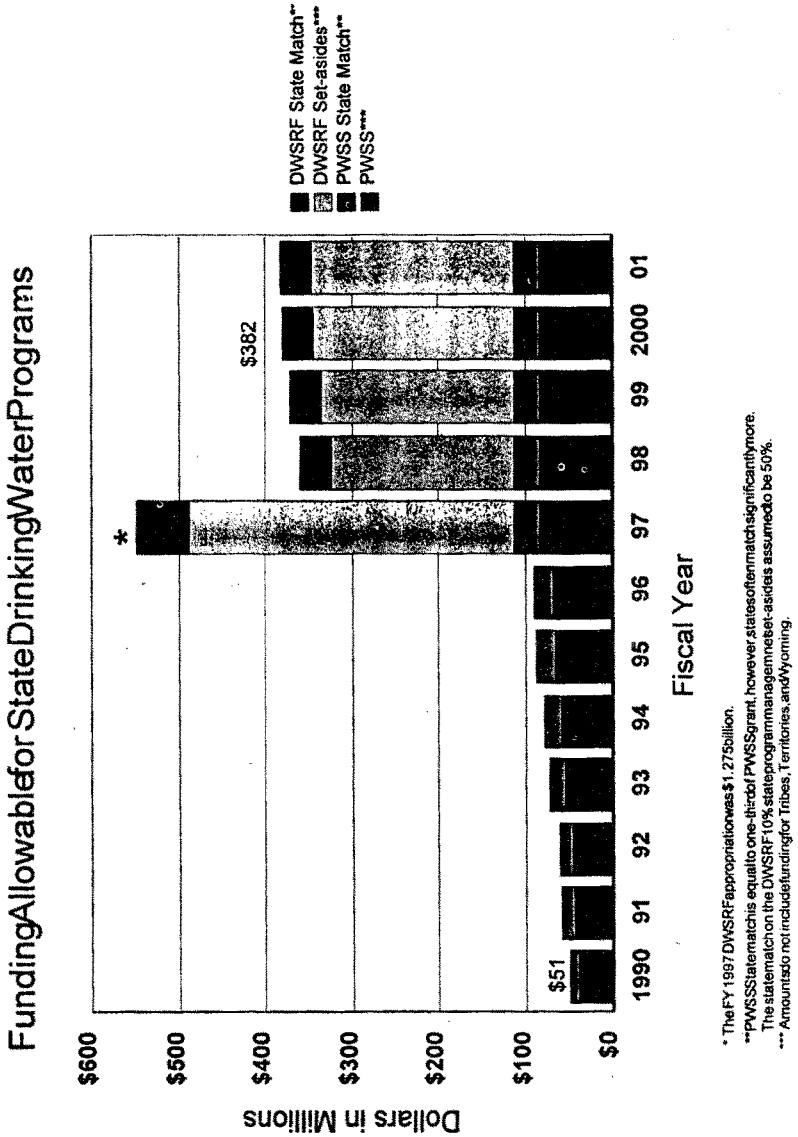
While some threats have been eliminated and some require continual management, new challenges are arising, including—

- unknown, or newly emerging contaminants;
- a pace of development that may threaten source water quality if not properly managed;
- an expanding and aging population that increasingly includes those with special health concerns;
- increasing demand and competition for water that strains available resources;
- a need for high-quality research on health effects and treatment technologies;
- a need for accurate information on compliance with drinking water standards; and
- a need for data that is reliable and accurate and information systems that can serve as a user-friendly reference for the drinking water community and the general public.

CONCLUSION

I am confident that the safety, security, and availability of drinking water will always be at the top of the American public's agenda. EPA will continue to work tirelessly with Congress, the States, localities, and others to identify and develop the best mechanisms for full and appropriate implementation of drinking water protection activities.

Thank you again for the opportunity to discuss these important issues. I would be happy to address any questions you may have at this time.



Mr. BILIRAKIS. Thank you, Mr. Fox.

Mr. Fox, just to start the questions, does EPA essentially agree with the findings of GAO?

Mr. FOX. At this point we haven't seen the final report. As you know, it was just released today. We did comment on a draft report.

I have reviewed the draft summary of this report. Again, it is difficult, because I have not seen the final, but the draft report cer-

tainly is consistent with our understanding of the current states of financing today with the State programs.

Mr. BILIRAKIS. Well, I appreciate that. And with all respect, the question is, was EPA aware that 75 percent of States had inadequate staffing levels in their drinking water programs?

The GAO report assembled information on State funding for drinking water programs, and the EPA, did they or did they not possess that information?

I guess basically the question goes to, would you expect that you would agree that EPA would agree ultimately, once you are able to look at this report, with the findings of the GAO? If that is the case, maybe you can share with this committee what EPA has been doing or is planning to do regarding some of these findings.

Mr. FOX. We will, needless to say, offer for the committee our very specific comments on the GAO report. I would be happy to provide that.

In general, I think the conclusions of the report are fair. That is, there perhaps are some deficiencies today at the State level for implementation of these programs. However, I think the report shows that the solutions to this are fairly complicated.

I think, frankly, when we step back we see that the Congress and the administration—we really rose to the challenge together—we provided sizable new investments for drinking water programs.

One of the overarching conclusions of the GAO report is that the Federal Government has really stepped up to the plate and provided sizable new investments, in some cases quadrupling the total Federal investment in a very short period of time, but there has not been the commensurate State level investment in these programs.

I think this is a challenge for all of us. I don't mean to intend to point fingers here. This is an opportunity for all of us to try to solve a problem that I think we all owe to the American people.

Mr. BILIRAKIS. I would ask, of course, that you provide to the committee your comments on the GAO report. You have already mentioned you are willing to do that. That is important that we get that.

[The following was received for the record:]

EPA agrees with the GAO's finding that funding and opportunities provided by congressional appropriations in addition to the required State match is sufficient to help States meet their current responsibilities under the Safe Drinking Water Act (SDWA), if States are able to use those funds. EPA acknowledges that many States face certain barriers, at the State level, to using these funds and we are committed to working with States to help them overcome these barriers. If we are not successful in this effort, States will face critical resource problems meeting their current responsibilities to protect public health. As more regulations are promulgated in the future, these resource problems will grow.

In the early 1990s, implementation of State drinking water programs was severely hampered by a lack of resources. A widely-held criticism was that the federal government was not providing sufficient funds to the States to cover an appropriate share of the costs of the drinking water program. Between Fiscal Years 1990 and 2000, federal funds for the Public Water System Supervision (PWSS) grant program have increased from $39.3 million to almost $94.0 million. The Drinking Water State Revolving Loan Fund (DWSRF), authorized in the 1996 SDWA Amendments, provides the means for States to access even greater amounts of federal funds for use in implementing their drinking water programs. The States must decide the balance in use of SRF funds between infrastructure financing and State program support. On average, States are not setting aside the full level of funds that are available for State program support, and are not spending the funds that they have set

aside. The GAO report shows that States had only expended approximately 20 percent of the more than $400 million that they had reserved to conduct set-aside activities.

There are several reasons that States do not set aside the full level of available funds. When forced to choose between helping water systems improve their infrastructure or funding State implementation, assistance or compliance programs, the latter is not always the highest priority. Further, of those States that have set-aside funds from the DWSRF for program implementation, many have not been able to actually make use of those set asides because of State-imposed funding constraints. Inability to increase State-authorized staffing levels, hiring freezes, and inadequate salaries, which make it difficult for States to hire and retain qualified staff, have all played a role in limiting program implementation. Adequate funding for State programs is currently available, but that funding is not yet fully accessible and there is competition for those funds from other critical public health priorities.

Mr. BILIRAKIS. But Mr. Brown has mentioned arsenic downstairs in our little bit of a press conference regarding this hearing. He mentioned radon, et cetera.

EPA apparently is considering changing the standards on arsenic. We want them to do what is consistent with human health. I was just asking counsel if EPA had contacted us regarding changes they feel maybe are necessary in the statutes to afford them to be able to do a better job as intended by the 1996 amendments, if you will. He tells me he is not aware of that. Maybe there has been, but he is not aware of it.

It is critical that we do the fundamentals, too. We are talking about changing standards. Maybe they are necessary, and maybe they are not necessary. Your statement indicates that EPA will fully evaluate an upcoming scientific advisory assessment on arsenic.

I would note that a draft report of the SAB, which was just issued a few days ago, raises significant questions regarding EPA's use of the 1999 National Research Council report on arsenic.

I understand you cannot be expected to respond to a draft report. I am not asking you to do so. However, can we at least have some assurance that all comments and recommendations of the Scientific Advisory Board will be given proper credit in any decision on the final standard?

Mr. FOX. There is no question they will, Mr. Chairman. In fact, we are going to be considering all the comments that we receive before we make any final decisions.

If I could just make one comment about arsenic, there have been a lot of questions about the number that we recommended. I will be the first to admit that one of the most difficult jobs in my position is picking a number for drinking water standards, because you have to weigh a lot of different information in making that decision.

The current standard is 50 parts per billion. Pretty much everybody would agree that this standard is woefully unprotective of public health. The National Academy of Sciences has said that.

Mr. BILIRAKIS. Many States have a stricter standard, do they not?

Mr. FOX. That is correct. However, you will hear later from analysts here today. One group in their comments said we should have picked a number at 3 parts per billion, and another group on the water suppliers side said we should have picked a number about 10 parts per billion. We ended up at about 5.

If you do a straight line interpretation of the National Academy of Sciences report, you could end up with a number much smaller than 5. There is a lot of scientific uncertainty, I will be the first to admit it. Everybody is certainly pointing in the direction, in my opinion, that this number has to be much, much lower, and in the zone of 3 to 10 parts per billion, to be protective of public health.

Mr. BILIRAKIS. I have no position on that. Basically what I am saying is that we should be concerned about that. But again, the States have the obligation to implement these things and enforce them. If they are not doing their job adequately, then we have to address that problem, and in fact probably address it maybe in a more primary manner, if you will, than being concerned about possibly focusing on changing standards. We can change all the standards we want, but if they are not put in place, what good are they?

Mr. FOX. That is correct.

Mr. BILIRAKIS. Mr. Brown, to inquire.

Mr. BROWN. Thank you.

Mr. Fox, I would like to agree with you when you said that everybody thinks that 50 is too weak. Unfortunately, a majority of this Congress apparently does not think that.

Comment on that, if you would. We tried to strip that on a floor amendment and were unsuccessful; that is, the reporting action "to cease all actions relative to enforcement" of the current standard that you say no one agrees with anymore.

Mr. FOX. In your opening statement, Mr. Brown, you referred to an anti-environmental rider. Some on the other side of the aisle have suggested to me that this is an appropriate condition of funding discretion.

Whatever you call it, there is no question in my mind, having spent a lot of time on this subject, that that language included in the House appropriations bill is wholly irresponsible. When you are concerned about protecting public health, there is no question that the current standards of 50 parts per billion is not protective of public health.

There are some drinking water systems with arsenic at that level. A strict interpretation of the House language is going to prevent us from providing public health protections to those communities around the country. I think that is very irresponsible.

Mr. BROWN. Thank you.

Mr. Stupak, whose district actually borders, I believe, three of the Great Lakes, and my district, which borders Lake Erie, he and I worked to include language on estrogenic substances in the 1996 Safe Drinking Water Amendments. There was an endocrine disrupter screening program which was authorized in the Food Quality Protection Act which is underway in EPA.

I understand much of EPA's work on that is handled by other branches of the agency. The Office of Water received $1 million this fiscal year for work on endocrine disrupters. You expect to receive similar amounts this year and into the future.

Describe the Office of Water's activities, if you would, on endocrine disrupters for us.

Mr. FOX. First let me say that endocrine disrupters do pose a potential risk to public health. We are still doing a number of research investigations into trying to define that risk more clearly.

The administration was supportive of the language that you and your colleagues put into the Safe Drinking Water Act, as well as other colleagues put into the Food Quality Protection Act. We are embarking on a screening program to assess whether or not these chemicals are found in our food supply or in our drinking water.

The Office of Water has a $1 million program that will support our working with the Office of Research and Development to look specifically at drinking water treatment systems, examining closely as to what chemicals are found in their effluent, what chemicals are found in different places in their treatment processes, and ultimately what chemicals might be found in the treated water that comes out of the plant. Our intent is to get a much better understanding as to what is the exposure to the American public to endocrine-disrupting chemicals is and a better understanding of what these treatment plants will actually provide in the way of treatment for these chemicals.

This is a $1 million program, so it is a sizable one but not a very large one. We are anticipating that the work will begin in fiscal year 2001 and we will have a report before the end of 2001.

Mr. BROWN. Thank you.

Mr. Guerrero, your testimony tells us that the primary reason that States cannot properly implement their drinking water programs is not Federal funding levels but State-imposed spending constraints that force inadequate staffing levels.

Could you elaborate on the results of your 49-State survey with respect to these State barriers?

Mr. GUERRERO. Yes. There are some States that have limits on the amount of funds that could be spent in this program area. Some States have limits on the number of staff they can devote to this program. Some States are struggling with problems in terms of attracting the expertise they need because of compensation levels which do not allow them to compete effectively in the market for the kinds of expertise they need.

All of those factors contribute to various problems in having the right kind of staff and the right numbers of staff.

Mr. BROWN. Would you will be willing to provide this committee the individual State response to the GAO survey, if you would?

Mr. GUERRERO. We would certainly entertain that request if you were to make that.

Mr. BROWN. I just did. You would provide those to us quickly?

Mr. GUERRERO. We have a policy, a draft policy, as you know, that allows for access to workpapers. We ask that that request be put in writing, and we would then consider it and get back to you.

Mr. BROWN. That is not a very definite answer. That is the best you can do? I will write a note to you and hand it to you. You will consider it then, or you will get us the report, then?

Mr. GUERRERO. We will consider it and get back to you promptly.

Mr. BILIRAKIS. If I may, I think it is a very meritorious question. It would help us an awful lot. I think you would agree, Mr. Guerrero.

Mr. GUERRERO. Yes, Mr. Chairman.

Mr. BROWN. There are two of us that want that.

Mr. BILIRAKIS. Do you want something from the committee in that regard?

Mr. GUERRERO. Let me explain some of the considerations. When we make determinations to turn over actual workpapers for products like this. Of course we are obviously concerned about things like privacy and information that was provided to us with pledges of confidentiality. That is why I caveated my response to you.

I am not aware in this particular case that we have those particular problems, but there is a sensitivity in terms of comparing States with one another and who is doing better than somebody else. That was not the purpose of this particular job.

If there is a bipartisan agreement that we provide that information, we would be happy to.

Mr. BILIRAKIS. We also do not want to put your work into a dangerous position, either. We bank on your work so very much.

Mr. GUERRERO. The concern here is that in order to be of service to you in answering these questions, it requires some level of confidence on the part of the States that if they provide us information that they view as sensitive, that can put them in a situation that makes them look bad in some circumstances and relatively better in others, that they understand whether that information is likely to come up in the public domain or not.

If that is going to compromise our ability to collect that information in the future, we would like to work with you on that.

Mr. BROWN. Thank you for teaching me the word "caveated." I had never heard that.

Mr. BILIRAKIS. You are from Ohio.

Mr. BROWN. I am from Ohio.

Most of this information is about State staffing levels. That is public information in the States. We are asking you to pass that information along to us. That is not a question of confidentiality. That is in public domain already in the States.

Mr. GUERRERO. That is exactly right. That is the kind of consideration we look at. To the extent this is in the public domain——

Mr. BILIRAKIS. I would think EPA would have this information. Is that true?

Mr. FOX. We certainly have some of it. I would pledge that whatever information you cannot get from GAO, that we will be of help. We will do our best to provide it to you.

Mr. BILIRAKIS. Okay. Maybe we can ask the staffs to get together with your staffs in terms of the wording of the letter so we can get what we think we need but at the same time not jeopardize your future efforts.

[The following was received for the record:]

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON COMMERCE,
September 25, 2000

The Honorable DAVID M. WALKER,
Comptroller General,
U.S. General Accounting Office,
441 G Street, N.W.,
Washington, D.C. 20548

DEAR MR. WALKER: On September 19, 2000 the Subcommittee on Health and Environment received testimony from Mr. Peter Guerrero, Director of Environmental Protection Issues, General Accounting Office (GAO), regarding GAO's report titled *Drinking Water: Spending Constraints Could Affect States' Ability to Meet Increasing Program Requirements.* Given the reliance of that report and Mr. Guerrero's testimony on a survey of state drinking water program's administrative expenditures

conducted by the GAO earlier this year, we requested during the hearing that GAO provide the Subcommittee and its members with copies of the individual survey responses.

We wish to renew in writing our earlier, oral request for these survey documents, and request that GAO provide this material no later than the close of business on October 6, 2000.

We appreciate your attention to this request. If you have any questions regarding this matter, please have your staff contact Mr. Joseph Stanko, Majority counsel, at 225-2927, or Mr. Richard Frandsen, Minority counsel, at 225-3641. Thank you for you cooperation with the Subcommittee.

Sincerely,

MICHAEL BILIRAKIS, *Chairman,*
Subcommittee on Health and Environment

SHERROD BROWN, *Ranking Member,*
Subcommittee on Health and Environment

UNITED STATES GENERAL ACCOUNTING OFFICE,
RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION,
October 4, 2000

The Honorable MICHAEL BILIRAKIS,
Chairman, Subcommittee on Health and Environment,
Committee on Commerce,
House of Representatives

The Honorable SHERROD BROWN,
Ranking Minority Member,
Subcommittee on Health and Environment,
Committee on Commerce,
House of Representatives

In response to your request, we are transmitting copies of the individual state responses to our nationwide survey on the states' expenditures to implement their drinking water programs. Because of the sensitivity of these data and the difficulty of making meaningful comparisons among the states, we included only aggregate data on the states' expenditures in our report. We suggest that caution be exercised in drawing comparisons among the states because a variety of factors influence the level of state expenditures. Such factors include the number and type of water systems in a state, a state's size and population, and the type and incidence of contamination.

We did not validate the responses provided by the states. However, when a state's initial survey response contained gaps or apparent discrepancies, we followed up with the appropriate state officials and noted any corrections on the survey document. In addition, once the data were computerized, we ran a series of data checks to ensure that the data were consistently reported and made corrections as necessary. For example, one data check detected states' errors in calculating their minimum matching contributions. Thus, we are also providing a spreadsheet with the adjusted expenditures, which served as a basis for the aggregate data included in our report.

Sincerely yours,

DAVID G. WOOD,
Director, Natural Resources and Environment

Enclosure

[Information on State data is retained in subcommittee files.]

Mr. BILIRAKIS. Mr. Bilbray.

Mr. BILBRAY. Thank you, Mr. Chairman.

Let me say that the conversation that just went on I think was a very healthy one. I think, in all fairness, a lot of us say, why can't we get this information, and do not understand the defensive mechanisms that can be thrown up by bureaucracy from information-gathering.

I appreciate the fact that you try to keep those lines of communication open and eliminate the paranoia or the justification for restricting information to this body. I think the information is more important, and I'm sure the ranking member is sensitive to that.

Mr. Fox, I want to thank you for pointing out the reality, where the real threats lie on the first stage, but also the fact we need to talk about this. Microbial contamination is not something that gets a lot of high profile attention by those of us in politics. It is not sexy to talk about that, but it is sexy to talk about poisoning the waters.

Frankly, I appreciate the fact that you placed that—that here it is the No. 1 threat. We have other things we have to do. The arsenic is a good example. I guess a lot of us like to talk about arsenic because it equates to—people kind of picture that as to someone is pouring poison into our water, when in fact a high percentage of the problem is ambient background arsenic that exists naturally.

My biggest concern, though, is that as we talk about these components, that we take a look at where we need to go in the future. Here is this issue about the States having the ability to actually implement the law.

Let me be very frank. When I come to Washington, I do worry about drinking the water that the Federal Government provides within this district. I don't worry about it in San Diego mostly because I have more faith in the oversight and the operations in San Diego than I do in DC.

Does that sound harsh? I think if you look at what has happened in the last 10 years with the water quality problems in this city, I don't think it is harsh. I think what we are talking about here is a real life experience that if I need to trust somebody to do my oversight, I sort of trust the States and the local communities a little more than I do the Federal Government when it comes down to the practical application of the standard.

So what I see here is this issue of do we look at providing the resources for oversight, and is it best spent for the public resources at the Federal level here in Washington, or at the local level in the communities?

I don't mean to make this an "us and them," but I think that we may need to be talking about the fact that is it better to have the infrastructure of water quality control at the State, and I prefer the local level, but I am prejudiced to it. I admit to that. I come from that background, and I am as prejudiced as holy hell on this issue.

But I think that my own personal experience about the concern of the Federal oversight locally, in this town, is the fact that I think that level of confidence is something we all have to just adapt to.

When we talk about the use of our resources, is there a degree of concern here that we may be redirecting Federal resources to the local community, or are you guys open to the fact that we need to take a look at oversight, and that local and State oversight usually tends to be the most cost-effective when it comes down to it?

I use an example—and again, my own prejudice—again, the implementation of the Clean Air Act of having the major oversight being local and State, and then the secondary standard-setting kind of thing being the Federal.

Would you like to comment on that?

Mr. FOX. First, your experience in California for both air and water is somewhat unique relative to the rest of the Nation. Those

communities, as you know, have spent a good deal of time on these programs, perhaps more so than others.

I don't disagree about anything you said about the preference for where these problems should be solved. The drinking water systems in this country have been primarily locally provided services. The Federal Government got involved in this in the sixties in large part due to the concern of interstate commerce, acknowledging that as the public travels around this country, there are some basic protections that they should feel confident about: that they can drink water in another State and get high quality water.

The vast majority of our resources are given to the States, which, in turn, are given to the local governments. I think that is the appropriate pattern.

We have talked a lot today about these oversight dollars, implementation dollars. I just do not want to hide the fact that this is an important subject, but it also is a much, much smaller part of our overall financing problem than the real infrastructure problem, which you mentioned in your opening statements.

I know there are a number of Members of Congress on a bipartisan basis, and you can count the administration among them, that think we need to have a debate about what is the appropriate Federal level of involvement in infrastructure. I am talking mostly about concrete and mortar—to provide the increased investment that is necessary to meet these needs.

Truly, there are literally hundreds of billions of dollars of needs that we have for both drinking water and wastewater. We do need to have a debate about the Federal role.

Mr. BILBRAY. I would ask us again to look at the fact of our big successes. I just saw in California one of our great successes is that the State and local community is the implementing arm and agent of the Federal regulations, and the Federal oversight is really just that.

I do not want to see us make the mistake that we look too much at the concrete and steel. Let's face it, there is a whole lot of pressure and interest groups who would love to see us spend it on that. They can make money on that. But the local oversight is not something that any real political pressure group benefits from, but it is part of the essential formula.

I yield back, Mr. Chairman.

Mr. BILIRAKIS. You had nothing to yield.

Mr. Green.

Mr. GREEN. Thank you, Mr. Chairman. I would like to join both the chairman and our ranking member in asking for the information on how all 50 States responded to the GAO survey. Obviously, I have an interest not only in Texas but all over the country, because of the jurisdiction of our committee.

Mr. Fox, I noticed when I reviewed your testimony that you had a number of clean water issues to focus on. Can I ask why the EPA, in light of their recent action, did not include MTBE in your discussion on contaminants?

Mr. FOX. In fact, we are doing a lot in the drinking water program on MTBE. I know this is a subject on which the subcommittee has spent a good deal of time and attention. I am not sure what I can add, but I will tell you a couple of things.

One, from a national drinking water standpoint, MTBE is being found in drinking water. On one level, it is found at very high levels typically associated with a spill of some kind. However, it is ubiquitous. It is being found at lower levels throughout the country.

We are now in the process of developing a new secondary standard for MTBE which we hope to have out by the end of this year.

Under the Safe Drinking Water Act, a secondary standard is a standard based on taste and odor, as opposed to what we call an enforceable public health standard. We should have more information for this committee shortly. Currently, we are doing our final interagency review on the secondary standard level.

We are also participating with the agency in an overall look at MTBE. The administration has a series of legislative principles that a Senate environmental committee has recently acted on consistent with what the administration would like to see. Needless to say, we would like to see the House do the same.

Mr. GREEN. You support a significant phase-down of the use of MTBE?

Mr. FOX. Absolutely, from a drinking water standpoint, regardless of whether we can demonstrate a public health threat. And I don't want to belittle that. The fact that MTBE or gasoline can be smelled in the water basically makes it unusable to drinking water systems. This is a very serious problem.

Mr. GREEN. I have been trying to follow up on the efforts. Is there any information that the EPA has that exposure to MTBE may be a cancer-causing agent or carcinogen?

Mr. FOX. There is some information. My understanding is that it is at higher levels, but that does not come under my office.

Mr. GREEN. Higher levels?

Mr. FOX. Higher concentration levels.

Mr. GREEN. I have never been able to hear that. We see that in newspapers, yes, but not when we had somebody testifying. I am not aware of any specific data. If you had that, would you be willing to share that with the committee.

Tell me what information does EPA have on the presence of MTBE in the drinking water supplies across our country. Does EPA have any comprehensive, uniform data about the presence of MTBE in drinking water supplies?

Mr. FOX. There have been a number of studies done by the U.S. Geological Survey. Also, a number of States have conducted monitoring. We have required MTBE monitoring as part of our unregulated contaminants monitoring rule which will go into effect next year. It will require that a number of systems monitor for MTBE concentrations. The results of that monitoring will be available on line in the national Containment Occurrence Database. We can certainly get you that data.

Generally, the picture shows, as I said, that you find relatively low concentrations of MTBE ubiquitous around the country, talking about 2 parts per billion, and in some areas you will have a hot spot generally associated with a leak of some kind.

[The following was received for the record:]

Information from the National Contaminant Occurrence Database, which provides an overview of MTBE national occurrence as reported by States and public water

systems, indicates most of the concentrations detected are at low levels. Of 1,060 public water systems tested, only 54 systems reported detections of MTBE. The concentrations ranged from 0.4 parts per billion (ppb) to 31.1 ppb. The average detected concentration was around 3.1 ppb.

Regarding instances of high concentrations being detected, the City of Santa Monica discovered that two of its drinking water wellfields, Charnock and Arcadia, were contaminated with MTBE at levels as high as 610 ppb and 86 ppb respectively in 1996. In response, the two wellfields, representing 50 percent of the city's drinking water supply, were shut down and the City began purchasing replacement water. After completing investigations of the area, leaking underground storage tanks were identified as contributing to the contamination of the drinking water supply.

Mr. GREEN. A year ago we saw the EPA regulations requiring all large public water systems have a representative sampling of water. The tests started only recently and the comprehensive data is still being compiled.

Mr. FOX. That is correct.

Mr. GREEN. When will the results from the mandated test be available?

Mr. FOX. I will get back to you on that one. They are just starting to collect that. There are other studies available, including those done by the USGS.

[The following was received for the record:]

EPA published the Unregulated Contaminant Monitoring Rule (UCMR) in September 1999. This rule requires all large public water systems and a representative sample of small public water systems to monitor for certain unregulated contaminants. MTBE was included in the list of contaminants for which systems must monitor. Under the UCMR, public water systems will begin monitoring in January 2001. The first results of monitoring should be available online by the Spring of 2001.

Mr. GREEN. How old are those studies?

Mr. FOX. There has been a range all over the last 5 years, including some in the States. California was the leader, of course.

Mr. GREEN. Let me make you aware of the results on testing in Texas.

Our Natural Resource Commission collected more than 26,000 samples from nearly 6,500 entry points of drinking water distribution systems. Of these, MTBE was detected in 13. Furthermore, the mean result is 2.6 parts per billion.

Do you have any comments on that? Would that be similar to what other States have had?

Mr. FOX. I would like to look at that data. The average that you describe is certainly consistent with my understanding when I testified. The fact that you had—I think you described there were 25 percent of them in excess of 13 parts per billion. That sounds a little different than my understanding of the national picture. But again, let me look at the data.

[The following was received for the record:]

Occurrence data from a joint U.S. Geological Survey/EPA study conducted in 12 States in the Northeast/Mid-Atlantic region show that MTBE was detected in 7.8% of public drinking water supplies at a detection level of 1.0 ppb. This study analyzed finished drinking water samples from 2,110 randomly selected community water systems. Most of the MTBE detections were below 5 ppb, with 2% of the CWSs reported above 5 ppb, and only 0.8% at levels above 20 ppb, the lower limit of EPA's Drinking Water Advisory.

In 1998, the State of Maine conducted a statistical survey of its public water supplies and private wells providing drinking water to the community. MTBE was detected in 150 or 15.8% of the 951 private wells sampled (minimum reporting level of 0.1 parts per billion). 67 (6.6%) of the wells showed a level of MTBE at 1 ppb

or greater, and 10 wells (1.1%) had levels exceeding 35 ppb, (Maine's drinking water standard). For public water systems sampled, MTBE was detected in 125 (16%) of 793 public water supplies. 48 of these supplies (6.1%) showed a level of MTBE at 1 ppb or greater. None of the public water systems had detections above 35 ppb.

There are other State sampling results. For instance, in California, 1,718 public water systems (serving 30 million of the 34 million people in the state) were sampled and only 32 systems (1.9%) had MTBE detections. Of those systems with detections, 20 systems (1.2%) were at levels above 5 ppb (California's secondary standard based on taste and odor), and 12 systems (0.7%) at levels above 13 ppb (primary health based standard). Since 1995, the State of Maryland has been sampling community and nontransient noncommunity public water systems for MTBE. Of the 1,060 public water systems tested, MTBE was detected in 66 systems (6.2%) with only 10 systems (0.9%) having levels above 20 ppb.

Mr. GREEN. MTBE was detected in 13 of the 6,500 entry points.

Mr. Chairman, will we have another round of questions?

Mr. BILIRAKIS. I don't contemplate that.

Mr. GREEN. Just to follow up, if I could——

Mr. BILIRAKIS. If you do it very quickly, without objection.

Mr. GREEN. Since my colleague said he did not have any problem with the drinking water in San Diego, I would like to follow up with the testing in California. It was updated this month.

You may know that information shows that out of the 7,000 drinking water sources tested for MTBE, MTBE has occurred at levels above the State MCL of 13 parts per billion in only about .2 percent of the samples. That is two-tenths of 1 percent of the sources have MTBE above the California MCL.

Are you familiar with that information?

Mr. FOX. Again, I think that is consistent with the picture I tried to describe for the committee.

Mr. GREEN. Last, if possible, I would like to have information based on—because in earlier testimony on MTBE, there was some concern about Lake Tahoe. From what I understand, the MTBE has dropped 80 percent from recreational vehicles, but there is a problem with ethanol now in Lake Tahoe because of the substitution. I think that the committee should have that information.

[The following was received for the record:]

Ethanol detections in the Lake Tahoe region are currently being found in the monitoring wells for underground storage tank facilities. While the occurrence of ethanol in these monitoring wells could be a result of ethanol in gasoline, there is also suspicion that the bentonite pellets used for well seals, when put in water, leave behind a high concentration of ethanol.

At this time the South Tahoe Public Utility district has not reported any detection of ethanol in its drinking water wells.

Mr. FOX. Part of the way MTBE works in the environment is it volatilizes very quickly. You can have a very high concentration in a place like Lake Tahoe over a 3-day weekend when there is a lot of activity, and then go out and monitor again, in the middle of the week and find lower levels because it goes into the air.

Mr. GREEN. Did you say MTBE?

Mr. FOX. Yes.

Mr. BILIRAKIS. Mr. Bryant is recognized to inquire.

Mr. BRYANT. Thank you, Mr. Chairman.

Mr. Fox, I will question a little bit off the focus of today's hearing. Maybe you can help me or direct me to someone in your agency.

EPA Region IV, which covers my State of Tennessee, recently announced a reinterpretation of rules pertaining to high water events

which would prohibit the common practice by municipal sewer facilities of bypassing the biological treatment point near these events.

Cities in my district have expressed to me a concern over this recent reinterpretation of existing EPA rules. As I understand, this rule would prohibit this diversion because of the tremendous cost applications. Obviously, the city officials are concerned about this.

My question to you is, is this reinterpretation related solely to the Clean Water Act, or does the Safe Drinking Water Act contain provisions affecting the permitting of these wastewater treatment facilities?

Mr. FOX. I have not heard anyone describe this as affected by the Safe Drinking Water Act. This was only presented to me as part of the Clean Water Act. It is an issue with which I am very familiar. I have spoken, in fact, with some of the municipal sewage districts around the country including some from the State of Tennessee. This is a very complicated, difficult, legal, technical and financial issue. I know the agency has some obligation to provide some clear guidance on this subject, and I let the sewage authorities know that. You should be expecting to hear something from EPA in fairly short order. By "short order," I mean in the next few months.

Mr. BRYANT. Thank you. Mr. Guerrero, one thing that your report indicates to me that jumps out at me is that 75 percent of the States believe they have inadequate staffing in the drinking water programs, and over 90 percent of the States believe that inadequate staffing will continue. Can you briefly tell us a little bit more about the possible consequences of these kind of numbers to public health?

Mr. GUERRERO. Yes. What we found was that as a result, States are, in some cases, doing what is minimally required, so what gets triaged, what doesn't get done are things such as technical assistance or conducting sanitary surveys, which are intended to be more preventative in nature, identifying problems before they occur. These have an impact on the smaller systems that lack the technical resources and the wherewithal to do some of these things themselves. That is basically setting the stage for problems with a large number of small systems. About 90 percent, give or take, of all the community water systems are small, and, to some degree, are faced with challenges of meeting competing demands, and to the extent that the States cut back on some of these technical assistance and proactive-type measures, it does set the stage for future problems that could be related to the quality of the drinking water provided especially by smaller systems.

Mr. BRYANT. In connection with these funding numbers, and I had another question about your report indicating that in fiscal year 1999, State spending fell 20 percent short of the estimated need for spending, according to the ASDWA. I am wondering how real is this 20 percent funding shortfall and, again, would you have a similar answer to my first question, as to the consequences of only spending 80 percent for what is needed for safe drinking water, the same ramifications?

Mr. GUERRERO. Exactly. It has the same effects. In terms of the estimate of what is needed, we believe in the aggregate, the asso-

ciation's estimate is a reasonable estimate for the country as a whole. It doesn't predict what is needed in a particular State. But the association worked with about 25 percent of the States in developing its model to estimate needs. We looked in depth at eight States, and when we talked to the States, we asked them about the model. And in some cases they said, well, part of this model overestimates what we need and other parts of it underestimates needs. So it may not be the best predictor for an individual State, but its assumptions are reasonable and it is reasonable for predicting the total national need. How confident are we in that 20 percent number? I think reasonably comfortable.

Mr. BRYANT. Very quickly, one last question. Your report notes that these shortcomings on the part of the State programs, it also notes that the State spending has been increasing each year from $213 million in 1997 to $276 million in 1999. Is the problem then or is the problem that the States that are spending more, but like the old dog trying to chase the car, they can't quite get it each year. In other words, are the requirements on the State accelerating at a rate at which it is harder and harder for the States to keep up? Do we see that in your report?

Mr. GUERRERO. I think primarily what we have here is more of a structural problem than an acceleration of responsibilities. It is clear that the Safe Drinking Water Act sets forth a number of very demanding requirements for individual water systems to meet and for States to meet. Having said that, we did identify a number of impediments that exist now that are predominantly financial in nature, that could be overcome.

To put this in perspective, the Federal contribution in this area has grown about 60 percent over the last 3 years, give or take. The State contribution has grown about 10 percent. So both the Federal Government and the States are putting in more money for safe drinking water purposes. The problem is most of the Federal increase comes from the State revolving fund which the States are understandably reluctant to use because, by using those dollars, it removes those dollars for necessary infrastructure that they need. Also, they can't revolve those dollars and multiply them by making those dollars—once they are taken out of the SRF, available in the future to address those pressing infrastructure needs. So there is a today effect and there is a tomorrow effect by spending infrastructure dollars on program oversight. So the States are reluctant to use most of the Federal funds, because they are in this one category that requires them to, in using them, to compete with infrastructure needs. And then the States, as I mentioned earlier, have some constraints they are operating under themselves. They have hiring limitations. They have resource funding limitations. They have salary and compensation limitations. All of those combined make it difficult to bring to bear the resources needed to address fully the program elements today.

Mr. BILIRAKIS. Well, the gentleman's time has long expired, but I would like to go on because I think that is the gist of what we are doing here today. We can talk about standards all we want, but if they are not being enforced, then what good is it? So what we need from you all is some help in terms of whether or not we should be changing the legislation. I know we have the States testi-

fying in the next panel, and hopefully, Mr. Fox, you might have somebody remain in the room from EPA who will takes notes and listen to what the States will testify to. Ms. Capps, do you have any questions?

Ms. CAPPS. I have a request from my colleague, Congressman Green, who was unable to finish his remarks and then if he has time left, I have a question to ask too. I yield to my colleague.

Mr. GREEN. Thank you, Mr. Chairman.

Mr. Fox, in continuing the question, I am sure you are aware of the problems that States like California and my colleague from Nevada have had with MTBE from recreational vehicles in Lake Tahoe. Are you aware that the California Secretary of Environment, Winston Hickok, recently announced the levels of MTBE in Lake Tahoe dropped by 80 percent after recreational vehicles such as jet skies were banned.

Mr. FOX. No, I am not specifically aware of his announcement.

Mr. GREEN. Tell me what criteria the EPA uses to recommend that a chemical should be banned.

Mr. FOX. It is a fairly complicated process under the Toxic Substances Control Act. It is a procedure that the agency is currently going through, and we have not reached any conclusions at this point.

Mr. GREEN. Is it based on impacts on human health?

Mr. FOX. That is among the factors considered, as well as ecological impacts and, of course, economic impacts. A number of factors that go into the evaluation.

Mr. GREEN. It is not solely based on the presence of MTBE in drinking water? Would that be the sole reason for it?

Mr. FOX. It wouldn't be the sole reason. It very well could be a driving reason simply in terms of the analysis and what other factors were considered.

Mr. GREEN. What other chemicals or substances would meet this criteria? How do the reported levels of MTBE in drinking water supplies compare with the reported levels of pesticides/herbicides in drinking water?

Mr. FOX. It is a little bit of apples and oranges, but I certainly can get you that information. MTBE has very different characteristics than, say, Atrazine, so trying to compare a concentration of Atrazine to MTBE is a little difficult.

Mr. GREEN. But if it impacts human health is one of the criteria. It seems like it is not really comparing apples to oranges if it impacts.

Mr. FOX. Well, a number of contaminants in drinking water can impact human health or, for whatever reason, render the water unacceptable. As I said in the case of MTBE, simply having an odor—making it smell like gasoline—renders that water unacceptable, perhaps at levels that are actually lower than we have documented scientific information that it is a public health concern. But still to the public, it is unusable water.

Mr. GREEN. If you could provide that information for us.

Mr. FOX. Sure.

[The following was received for the record:]

The majority of human health-related research on MTBE has focused on inhalation of the chemical. At high doses, MTBE has caused non-cancer health effects as

well as tumors in animal studies. However, there have been no human or animal health effects studies concerning the ingestion of MTBE in drinking water. While EPA has determined there are insufficient data on MTBE health effects to establish an enforceable health-based drinking water standard, the Agency did state in the 1997 Drinking Water Advisory that keeping concentrations between 20 and 40 ppb or below would provide a large margin of exposure (safety) from toxic effects. The Advisory also noted that keeping MTBE concentrations in the range of 20 to 40 ppb and below would likely avert unpleasant taste and odor effects. The Agency does recognize some people may detect the chemical below this range and, in some controlled taste and odor studies, individuals have detected MTBE as low as 2 ppb.

Mr. GREEN. I think you would agree that if MTBE is removed from our gasoline supply significantly more ethanol would likely be used, is that correct?

Mr. FOX. I am the assistant administrator for water. That is certainly my understanding of the conventional wisdom.

Mr. GREEN. I had mentioned earlier as my time expired on my first 5 minutes, are you familiar with research showing that ethanol can make gasoline contamination groundwater worse by enhancing the solubility of the aromatic hydrocarbons in gasoline.

Mr. FOX. I am aware that this is a very complex problem and phenomenon in groundwater that probably does not lend itself to quick and short answers.

Mr. GREEN. It can also slow the biodegradation of the components of gasoline.

Mr. FOX. Sir, as I said, there are a lot of components and characteristics of plume movement that are very tough to generalize.

Mr. GREEN. My concern is if EPA is moving forward with banning MTBE, then the only substitute is ethanol, although my colleague from California and I, are we going to be here next year and the year after with the same problem with ethanol?

Mr. FOX. Part of the analysis that I am aware of is looking at alternatives. So when the agency makes its determination under TSCA, it will look at some of these alternatives to which you are referring.

Mr. GREEN. My last question, do you know if there is any ethanol contamination in Lake Tahoe's drinking water supply?

Mr. FOX. I am specifically not familiar with that, but I can certainly look into it.

Mr. GREEN. Okay. Because the information I have is in April of 2000 the South Tahoe Public Utility District reported that ethanol had been found in the groundwaters serving as drinking water supplies for Lake Tahoe residents and ethanol was substituted for MTBE after MTBE was found last year. I appreciate that information. I yield back my time.

Ms. CAPPS. Thank you. And I know my California colleague is itching to get into this too. Since I do have a little time left, and this is really pertaining to what I believe the chairman was getting at in summary, I would like to hear it stated one more time, Mr. Guerrero. The GAO report on page 22 indicates that States are generally in the best financial condition in decades. We hear all these impediments between the resources, Federal and some State resources, in actually getting the corrections in the water supply itself. If it is personnel or what is it, could you summarize for me and also reiterate what is the role that we could play to free this up?

Mr. GUERRERO. Right. As I indicated earlier, the States are faced with a number of constraints. They sometimes have staffing limitations. They sometimes have limitations on the amount of funding provided, and they sometimes have problems with providing the compensation necessary to attract the technically skilled and knowledgeable individuals they need in their programs. I think, you know, we do not make recommendations in this particular report, but I would say that it is really a twofold issue that need to be addressed. The first part of it clearly is the funding impediments of the States. The States themselves will need to come to grips with those limitations and figure out how to provide the funding that they need for these programs, especially to meet future requirements.

Some 90 percent of the States expressed concern to us about their ability to do that. So they are going to be challenged to do that. This, as you point out, is indeed a good environment for them to be challenged in that regard. Because we are not faced with the same situation that we were faced with back in the late 1980's when requirements were not being met, yet then the States were hard pressed financially.

Ms. CAPPS. Right.

Mr. GUERRERO. The other part of the equation is the Federal Government. That is how these grants are structured. The nature of some of the moneys are in a pot called the supervisory grant. That is matched on a 1-to-3 basis. The rest of the money, a large charge chunk of the money, is in a State-revolving fund pot which is intended for infrastructure.

Mr. BILIRAKIS. If the gentlelady doesn't mind, I appreciate you getting us back on point quite frankly. I am not belittling the standard and that sort of thing. This is what we hoped we would concentrate on, is why the States are not really doing——

Ms. CAPPS. Exactly, and what incentives they need.

Mr. BILIRAKIS. But that is going to take probably more than the amount of time that Mr. Guerrero might have or Mr. Fox might have. I made the comment previously, it is critical we hear from you, both of you, in terms of any recommendations you may have. If there is something we can do, we should do up here in order to get this done the way we want it to be done. Because again, I say we can change all the standards we may want, but if they are not enforced, if they are not being put in place, what good are they? We can thump our chest a little bit about changing the arsenic standard or whatever the case may be, but if that is not being put in place back there where the people are, what good is it? It is critical that we concentrate on that. If the gentlelady doesn't mind, I will yield to Mr. Deal who has been very, very patient.

Mr. DEAL. Thank you, Mr. Chairman. And in order to pursue the continuity of that discussion rather than to add a caveat to it, my colleague, Mr. Bilbray, has requested a bit of time and I will yield to him.

Mr. BILBRAY. Mr. Chairman, to get back off the subject, I think it is important to point out that as the Tahoe issue was talked about California has now taken the extraordinary effort of outlawing two cycle motors totally out of the State. But outlawing is not the answer. I think my colleague from Texas has pointed out

that we should stop mandating, to some degree, strategies. And, in fact, Mr. Fox, California has been waiting 525 days for a waiver request, so that we are not forced to do certain things. As the chairman points out——

Mr. FOX. I can definitely note that that does not come under my office, Mr. Bilbray.

Mr. BILBRAY. Thank you very much. I will exit with the chairman and apologize for my rude interruption of going off the subject again. I do thank my colleague from Texas for raising the issue that some things are not so simple as some people in this town would like to point out. I yield back to Mr. Deal.

Mr. DEAL [presiding]. My question deals with the very complex and multifaceted issue of safe drinking water. Being from a rural district, my concerns and the issues that my district faces are somewhat different, perhaps from some of the other members of this panel. Mine is a district in which the Chattahoochee River begins and flows into the largest reservoir for the supply of water for the city of Atlanta, that being Lake Lanier. It is a Corps of Engineers lake as you probably are aware. My first question is a rather broad one, and that is, what role does your agency play in the decisions that are made with regard to treated water discharges into bodies like Lake Lanier, what role do you play in working in a cooperative fashion with the Corps of Engineers, for example?

Mr. FOX. That is a very good question. In general, EPA is responsible for permitting discharges to reservoirs that come from all sorts of point sources including the discharge from a treatment plant. This authority is actually delegated to the State of Georgia and EPA has oversight responsibilities. With respect to the broader question of our involvement with the Corps of Engineers, we do, in general, coordinate our work with the Army Corps of Engineers to achieve our shared goals of environmental protection, water supply provisions and flood prevention.

Mr. BILBRAY. As you are aware, in any body of water like that especially in one that developed at a time when there were no extensive sewer treatment facilities, much of the contamination of that drinking water we are told at least is coming from leaking septic tanks near the shore, perhaps non-point source pollution from upper river sediment and run off. What financial assistance do these local entities and the State itself have to draw upon in dealing with these, perhaps not as direct an issue on water quality, but obviously, have an effect on water quality? What additional resources perhaps that we haven't even talked about here today would be available for them?

Mr. FOX. First, the loan funding we did talk about today actually can be used for some source water protection efforts like you described. Other program funds that I have jurisdiction over but, frankly, might not fall within the jurisdiction of this committee but with which you should be aware to solve your problem, include section 319 non-point source grants under the Clean Water Act. This is a program that is funded in excess of $200 million. We give moneys out to the States and there is a lot of flexibility that the States have in deciding how they will spend it. We also have a clean water SRF fund, like the drinking water, that is also a multi-billion dollar Federal account. Again in that case, we give the discretion

to the State of Georgia, but these kind of projects you described would be eligible for that as well. Those would be our two principal funding mechanisms certainly, the Department of Agriculture has some funds as well.

What I would tell you is that the problems that you described are imminently solvable. Many communities around the country have found ways to solve them. It requires that people spend time and attention in looking at various sources of different contamination and really trying to clean them up. New York State, for example, is a real model in solving some of its water quality problems very similar to the one you mentioned.

Mr. DEAL. It is hard for me to sell New York State to Georgia as much of a model for anything.

Mr. FOX. Sure, and you all could use some rain.

Mr. DEAL. Yes, we are praying for that. Thank you very much. I believe that concludes my time.

I want to thank the panel members for their attendance today. We appreciate your participation in this discussion. Thank you. If you could follow up with the requests that have been made by the members of this committee, we would appreciate that as well. Thank you.

We will now call the second panel. If they would come to the tables please.

Thank you, gentlemen. I will go ahead and introduce the second panel. First of all, Mr. Jay L. Rutherford, who is the director of Water Supply Division of the Vermont Department of Environmental Conservation. Second, Mr. Howard Neukrug, who is the director of the Office of Watersheds of the Philadelphia Water Department; Mr. David L. Tippin, the director of the Tampa Water Department. Mr. Eric B. Olson, the senior attorney of Natural Resource Defense Council here in Washington, DC. Mr. Terry Gloriod, the president of the Illinois American Water Company of Belleville, Illinois.

Gentlemen, we are pleased to have you here today. We will begin with the opening statement by Mr. Rutherford.

STATEMENTS OF JAY L. RUTHERFORD, DIRECTOR, WATER SUPPLY DIVISION, VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION; HOWARD NEUKRUG, DIRECTOR, OFFICE OF WATERSHEDS, PHILADELPHIA WATER DEPARTMENT, ON BEHALF OF AMERICAN WATER WORKS ASSOCIATION, ACCOMPANIED BY ALAN ROBERSON, DIRECTOR OF REGULATORY AFFAIRS, AMERICAN WATER WORKS ASSOCIATION; DAVID L. TIPPIN, DIRECTOR, TAMPA WATER DEPARTMENT; ERIC D. OLSON, SENIOR ATTORNEY, NATURAL RESOURCE DEFENSE COUNCIL; AND TERRY L. GLORIOD, PRESIDENT, ILLINOIS AMERICAN WATER COMPANY

Mr. RUTHERFORD. Mr. Chairman and committee members, good morning.

In addition to being a board member of the Association of State Drinking Water Administrators, I am the director of Vermont's drinking water and groundwater protection programs and I thank you for inviting me to testify today on behalf of the association. I would like to highlight two aspects of my written testimony. First

is the challenges that the States are facing with small systems, and increasingly complex regulations, and the second is problems with funding.

Our first concern is that EPA's new regulatory proposals have become more complex and do not seem to recognize the phenomenal workload and time required to help small public water systems comply with them. To illustrate this, I ask you to consider the typical public water system. It is not the utility serving 50,000 or 100,000 people. It does not have professional drinking water staffs or around-the-clock coverage. It is far more likely to be a small subdivision or a school or a restaurant. The fact is that there are 169,000 public water systems in the country, and of those, only 9,000 serve more than 3,300 people. This leaves a whopping 160,000 systems that must be considered small or very small.

In my State, Vermont, over 300 of our smallest community water systems serve approximately the same population as our single largest one. For the same number of people served, the difference between working with one utility with professional staffs versus 300 of the small variety is huge and illustrates the basic problem from the State's perspective. It is highly resource and time intensive to work with small systems. In my written testimony, there is a list of some 18 requirements resulting from the 1996 amendments.

These new requirements are much more complex than the "detect and treat" model that we are used to. Some of them require that the State become directly involved in process control decisions or conduct detailed inspections and assessments. It also imposes substantially increased reporting burdens on the States. It is against this backdrop that we ask you to consider the challenging tasks that the States are facing in carrying out our oversight duties regardless of the funding questions.

The result of these factors is that the expectations of this body and the public will not be met in full by many State drinking water programs. We have no choice but to prioritize our efforts. While we would all like to provide the expected level of oversight, we must limit our work to those issues of most immediate public health benefit. This disparity between expectations and realities needs to be addressed soon.

My second topic is on funding. The Federal program grant to States known as the PWSS Grant has remained static over the past few years, even though new Federal mandates are arriving at a breathtaking pace. Congress authorized the use of a portion of the each State's SRF capitalization grant for non-infrastructure initiatives, including State program support. This welcomed flexibility was a wise decision and has allowed States to develop programs that are best suited to their individual situations.

On the other hand, the use of set-asides to fund ongoing programs is problematic, especially in the absence of any PWSS increases. There were a number of pitfalls that limit its use, as some were mentioned earlier. The first one that I would like to mention is that the capitalization grants were only authorized through 2003, while the resources needs go well beyond. It has been challenging to get approval for new positions or to get people to accept them when the funding source appears to be temporary.

The second problem stems from the basic purpose of the capitalization grants which is infrastructure improvement loans for water systems. It is a difficult sell to explain to water system owners that we will be taking a significant piece of the capitalization grant to pay for State government instead. Also, even ignoring these issues temporarily, it is clear that there are program shortfalls of thousands of FTEs in the country and hundreds of millions of dollars over the next few years. Without corrections to these shortfalls, in spite of the dedication and hard work of thousands of State employees, we will not be able to keep up with the expected schedules for all these rules.

Mr. Chairman, I would like you to know that the States are fully committed to this program and would like to work with you, EPA, water systems and other stakeholder groups, to have our national drinking water program be the success that the 1996 amendments envisioned them to be.

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

PREPARED STATEMENT OF JAY L. RUTHERFORD, P.E., DIRECTOR, WATER SUPPLY DIVISION, VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

The Association of State Drinking Water Administrators (ASDWA) is pleased to provide written testimony on state resource needs, implementation of the 1996 Safe Drinking Water Act (SDWA), and infrastructure funding to the House Commerce Committee Subcommittee on Health and Environment. ASDWA represents the state drinking water administrators in the 50 states and six territories who have responsibility for implementing the many provisions of the SDWA and ensuring the provision of safe drinking water. State drinking water programs are committed to providing safe drinking water and improved public health protection to the citizens of this nation. ASDWA's testimony will focus on state resource needs and implementation concerns as well as the documented and growing need for adequate funding for water system infrastructure.

BACKGROUND

The SDWA was first authorized in 1974. Since that time, it was revised in 1986, and most recently in 1996. Forty-nine of the 50 states currently have "primacy" or enforcement authority for the Federal SDWA. To achieve and maintain primacy, states must adopt rules that are as stringent as the Federal rules and have the ability to enforce these regulations. Although some states have requirements that are more stringent; for the most part, state drinking water programs are implementing and enforcing a Federal mandate.

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

Since 1974, states have worked diligently with communities to assure their drinking water is safe. In doing so, states have adopted and been implementing standards for 20 inorganic chemicals including lead and nitrate; 56 organic chemicals including pesticides, herbicides, and volatile chemicals; total trihalomethanes; and total and fecal coliform; as well as implementing treatment requirements for surface water systems for turbidity, *Giardia,* and viruses. In addition, states have developed technical assistance programs, conducted sanitary surveys, and addressed operator certification, training, enforcement, emergency response, and review of water utilities plans and specifications.

The 1996 reauthorization of the SDWA contained numerous new requirements to enhance the provision of safe drinking water in this country. These new requirements include: providing consumer confidence reports; revisions to the lead/copper rule; a Stage 1 D/DBP rule; an interim enhanced surface water treatment rule; source water assessments and delineations for all public water systems; unregulated contaminant monitoring requirements; a revised public notification rule; a long-term enhanced surface water treatment rule; a filter backwash rule; a radon rule; a rule to protect ground water; an arsenic rule; a radionuclides rule; a Stage 2 disinfection

by-products rule; a long-term 2 enhanced surface water treatment rule; water system capacity development programs; a drinking water SRF program; and operator certification program revisions. In addition, the U.S. Environmental Protection Agency (EPA) is required to obtain data to make determinations on whether to regulate an additional five more contaminants every six years. Of critical importance is that the new law did not lessen or negate any of the previous requirements but rather added a significant number of major new initiatives and rulemakings (see chart on top of page 9).

In order to ensure the effective implementation of all of these new mandates—most of which will affect state programs between now and 2005 (see chart on bottom of page 9), states will need to develop new expertise, greatly expand their current staff, and increase financial resources commensurate with these intensive new activities. This is particularly challenging since the new law greatly expanded the nature of drinking water protection from primarily measuring contaminants at the tap to evaluating and protecting source water, enhancing water system capacity, and significantly increasing the amount of information provided to the public.

STATE FUNDING NEEDS

Federal Funding Sources

The SDWA authorizes EPA to fund up to 75 percent of the costs to states to implement the drinking water program. Historically, however, states have contributed 65 percent of the funding while EPA has only contributed 35 percent. While the actual contributions for individual states vary, with some substantially over matching the Federal contribution, the bottom line is that adequate Federal funding for this Federal law has not historically been provided.

The current Federal PWSS grant provides $87.5 million for states to implement their programs (the remainder of the $93 million currently appropriated by Congress is directed to Indian Tribes). This level has not increased for states over the last five years (since FY-97), even though many of the new initiatives under the 1996 Amendments became effective almost immediately.

The 1996 Amendments also allowed states to take set-asides from the drinking water SRF for program implementation. EPA, however, has never requested the full $1 billion per year authorization, and, in fact, is using the SRF as a convenient funding mechanism for new programs such as operator certification training which further reduces the corpus of the funds available for state use. In addition, many states have encountered significant barriers to fully accessing these funds including:

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

States view the PWSS grant program as a stable, dependable funding base that allows states to hire and maintain full time staff over the long term. States feel strongly that the preferred funding vehicle is the PWSS grant program and that either resources from the SRF should be shifted to this fund, or additional new resources should be directed to this fund. As an immediate first step, EPA should begin annually requesting the full $100 million authorized by the SDWA for PWSS grants.

State Resource Needs Analyses

ASDWA and EPA have jointly conducted state program resource needs analyses since 1988. Over the last twelve years, three analyses have been conducted, one in 1988, one in 1993, and the most recent analysis in 1999. The analyses looked at current needs as well as long-term needs, and in all cases, the analyses indicated a shortfall in funding to states. The most recent analysis, completed in 1999 (but not yet published), was based on a national model that looked at funding needs for small, medium, and large states between 1999 and 2005. Taking into account state funding contributions, as well as the Federal PWSS grant allocations, and set-asides from the drinking water SRF, the recent survey found the following (see chart on page 10):

- a state staffing shortfall of 1,627 FTEs in 1999 growing to 2,670 FTEs in 2005
- a state funding shortfall of $83 million in 1999 growing to $207 million in 2005

Collectively, the states, EPA, and Congress need to evaluate and agree on state resource needs and find the necessary funds to ensure the full implementation success of the new SDWA. Without adequate staff and financial resources, states will continue to be forced to prioritize workload efforts, focus on their highest priorities, and potentially extend the timing for full program implementation. The states do not believe these actions meet the expectations of Congress or the public, nor are they consistent with the states' desire to fully implement the law and provide maximum public health protection to all consumers.

Recommendations: 1) ASDWA and EPA should complete and publish the 1999 State Resource Needs Report; 2) EPA Headquarters, Regions, and states should work together to identify individual state resource gaps and develop a strategy for meeting staffing as well as financial needs; 3) as an immediate first step, EPA should request the full $100 million for PWSS grants; 4) as another immediate action, EPA should request the full $1 billion authorized for the SRF, including the amounts remaining from previous authorizations that were never requested; 5) Congress should consider moving the 10 percent set-aside in the drinking water SRF for state program implementation to the PWSS grants and ensure that the full funding is made available to the states on a long term basis; 6) Congress should direct EPA to conduct a thorough analysis of state implementation costs for each new rule or program activity and require that the cumulative cost burden be presented against the funds available to states to implement all the requirements; and 7) should EPA find that the increased costs are individually or cumulatively more than the state resources available, additional funding should be sought from Congress to ensure full implementation. States stand fully prepared to work with EPA and Congress to explore these and other alternatives to address these critical funding needs.

SDWA IMPLEMENTATION

The states were willing players and partners in the discussions leading up to SDWA reauthorization in 1996 with the specific understanding that a significant new mandate such as this law, which encompasses sweeping new reforms and activities outside of the traditional drinking water program, must be accompanied by significant new resources and staff. While essential, resources alone are simply not enough. In addition, states need a reasonable regulatory schedule and the flexibility to allow states to shift staff and resources to new programs in a calculated and manageable fashion. States and public water systems also need regulations that are simple, understandable, and implementable, and that focus on public health outcomes rather than micro-management of process minutia.

To date, states have attained a significant amount of success in implementing the provisions of the SDWA. For example, states have made progress in working with utilities using surface water supplies to install new treatment facilities to assure a much higher level of public health protection. Exposures to lead from drinking water have been significantly reduced; the data and information about water system quality and compliance is more readily available to the public through Consumer Confidence Reports, state compliance reports, the Envirofacts database, and state web sites; the training and certification of water plant operators is being significantly improved; and the drinking water SRF has been established in all states and loans are now being made to water systems to improve both their infrastructure and their ability to provide safe water to their consumers. States are also beginning a very comprehensive and resource intensive effort to delineate and assess the quality of all source water being used for drinking water to ensure that local communities have the tools and information they need to protect their drinking water sources.

Despite these many successes, new and different challenges have emerged. These include issues related to:

- resource limitations—funding and staffing
- rule development and implementation complexities
- increasing small system needs

These issues are discussed below.

Resources—Funding and Staffing

As indicated in the previous section, many states are facing a serious crises due to inadequate funding. EPA must recognize that state as well as Federal resources are finite and in many cases are already inadequate. States are also struggling to find and hire new staff. States are faced with a decreasing pool of qualified candidates as schools begin turning out more computer specialists than engineers. Hiring freezes and in many cases, non-competitive salary structures make many states unable to compete for qualified candidates particularly in today's tight labor market.

States often must resort to hiring entry level staff without the experience and management skills to develop and manage complex technological programs and, once trained, many employees leave the state for the private sector. These realities and dynamics must be understood by EPA.

In this current environment, the overwhelming magnitude and pace of rule promulgation and adoption is a major concern for the states. EPA intends to finalize no less than eight major rule packages in 2000 and 2001. The states are very concerned about the resources needed to ensure simultaneous compliance with all of these rules both for water systems and state programs.

Rule Development and Implementation Complexities

To maximize state efforts, given funding and staff limitations, EPA must work diligently to ensure that new regulations and programs are simple, understandable, and implementable. Unfortunately, many of the regulations that have been proposed recently do not fall under any of these headings. Certainly a large part of it has to do with the very complex nature of some of the contaminants being regulated—particularly for treatment technique regulations—but a large part of it is also caused by the Agency's inability to coordinate and provide an overarching implementation strategy that views all regulations holistically. A classic example is the manner in which the Agency is handling sanitary survey requirements for public water systems. When all is said and done, requirements for sanitary surveys will likely appear in numerous regulations with each regulation requiring something different or more than the last rule. Unfortunately, the individual rules do not cover all public water systems. The states, therefore, find themselves in the quandary of having to deal with varying requirements for different water systems for the same activity. This is an example of the barriers that are being artificially imposed on states and water systems.

Another example is the lack of communication between the program office and the Office of Enforcement and Compliance Assurance (OECA). OECA maintains an interest in the enforceability and violations reporting but does not appear to participate in a regular manner during rule development. The result is that proposals are often published that do not include key state implementation activities such as data reporting and violation determinations. This provides little to no opportunity for states and affected parties to comment as part of a complete rule package. Many of these elements have the means to make implementation relatively straightforward or immensely complex.

For years, states have also been imploring EPA to include data management and implementation staff as active participants in the rule development process. This participation is critical to ensure that the data tracking and reporting elements developed for the rule are in fact able to be computerized and evaluate compliance in a simple and straightforward manner. Too often, states feel that the reporting and tracking systems are more focused on micro-managing the process and fail to adequately measure the intended outcome of the regulation which is whether public health has been protected and improved. ASDWA believes that the reporting for most rules should encompass only a few critical reporting elements that answer the question about whether water quality has improved.

EPA also needs to maintain a balance among all of the requirements of the various rules to ensure that state time and resources are being spent on the most important public health regulations and in a manner that is commensurate with the potential public health benefits. This is often not the case because individual EPA staff work on a limited number of rules and are not aware of the requirements of other rules and how their efforts can be best incorporated into a comprehensive strategy.

Finally, states are very concerned about a real tension that exists between their need for time to adopt state rules and the interpretation of the SDWA that requires water systems to be in compliance within three years of rule promulgation. Clearly the law allows states the two years for rule adoption. This time is necessary for states to follow their own administrative procedures acts, obtain legislative authority if needed, and work with the public and stakeholders to develop the state rule, taking into account state flexibilities in decision making and the ability to be more stringent. States also need time to share drafts of rules and work through rule development issues with EPA Regions and Headquarters. During this period, states are also training staff and operators, certifying laboratories, modifying their databases, and generally developing the internal infrastructure to implement and enforce the rule. Once state regulations are final, they typically must then notify the systems of their new requirements and when monitoring should begin. If states take the full two years, then it leaves only one year for systems to monitor, identify a problem, hire a consulting engineer, submit plans to the state for approval, and in-

stall new treatment in order to meet the compliance deadline. As can be seen, this scenario is fundamentally flawed and presents yet another barrier to full and effective implementation.

Inserting EPA Regions into the implementation process prior to state rule adoption is not the answer, however. Regions are not on-site and do not have the resources, experience, and mechanisms in place to do much more than send letters and issue orders which greatly complicates the process and leaves the program in great disarray at the point when states must assume responsibility. This intrusion has the potential to negatively impact state fee structures and potentially abrogates states flexibilities and rights to develop rules that meets the needs of their states. This would be a disservice to the states, the utilities, and the public across this country and brings into question the concept of primacy and state authority.

Increasing Small System Needs

States are very concerned about the increasing regulatory and implementation impacts that future rules will have on small systems. Prior to the 1996 Amendments, the primary concern of the states was to get small systems to monitor for the regulated contaminants. For the most part, many of the contaminants were not detected and did not require the installation of treatment. This, however, will change dramatically in the future as EPA modifies regulations on arsenic and radionuclides, and develops regulations on radon, disinfection by-products, and the ground water rule. It will be critical that small systems understand the requirements, have cost-effective treatment options available, and willingly work with the states to achieve compliance. Since 95 percent of the systems that the states regulate serve less than 3,300 persons, the workload implications may be staggering if states must spend a significant amount of time educating, training, and working with small systems to achieve compliance. This is another reason why EPA's rules must be simple, understandable, and implementable.

Recommendations: 1) As stated above, EPA and the states need to work together to identify needed state resources and staff and develop a strategy to close identified gaps; 2) EPA needs to be cognizant of the numerous rule packages being developed simultaneously and develop tools and guidance to maximize the integration of the various rule packages for states as well as water systems; 3) EPA must continue to work toward simplifying and streamlining new regulations and reporting requirements; 4) Congress should ensure that EPA implementation, rule development, data management, and enforcement staff all work together from the beginning to the end of the rule development process to ensure complete, comprehensive, and implementable rule proposals; 5) EPA and the states need to work together to develop a small number of outcome, rather than process, measures for new regulations; and 6) Congress should re-evaluate the issue of water system compliance timeframes in light of the timing incongruity of state rule adoption and activities needed to be completed by water systems and their communities to ensure compliance.

INFRASTRUCTURE ISSUES

Significant investment in water system infrastructure is critical to ensure the safety of drinking water today and into the future. A recent report, prepared by the Water Infrastructure Network, indicates that a current gap of $11 billion a year exists between current infrastructure investments and the investments that will be needed annually over the next 20 years to replace aging and failing pipes and water treatment plants. Between water and wastewater needs, the estimate is almost $1 trillion in need over the next 20 years for water treatment facilities, water distribution systems, and wastewater collection systems.

The new mandates under the SDWA of 1996 will necessitate increasing infrastructure investment in the future. New rules dealing with disinfection by-products, radon, radionuclides, arsenic, ground water protection, and filter backwash are expected to create new treatment facility demands—particularly for small systems. The needs will continue to escalate as more regulations are promulgated that address new contaminants in drinking water, and as current standards are continually driven lower to match new analytical detection methods. In addition, new treatment technologies such as membranes, ozone, and ultra violet irradiation will become more common place in water treatment. A number of these technologies are currently quite costly to purchase, operate, and maintain.

Another significant issue of concern is aging and failing distribution systems. Funding must be made available to ensure that pipes are maintained and replaced as needed to ensure that the quality of water produced at the treatment plant is not significantly degraded between the plant and the consumer's tap.

Recommendations: 1) Congressional House members should consider joining the House Water Infrastructure Caucus; 2) Congress should evaluate the existing and projected infrastructure needs and work with Governors, states, mayors, and water systems as well as the public to evaluate funding mechanisms available to close the gap.

CONCLUSION

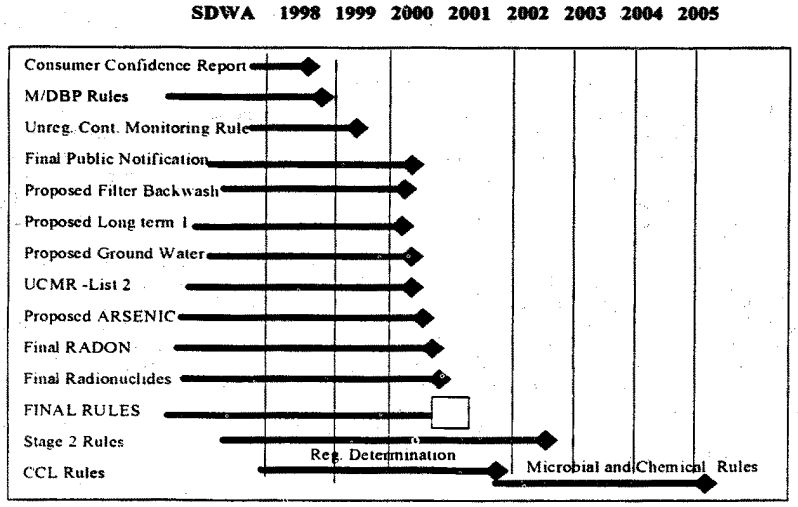
While states intend to do all they can to meet their existing and new commitments, full implementation of the SDWA is not achievable with the resources currently being made available and the obstacles states face. The implementation road blocks and barriers being placed before and upon states are beginning to take their toll. States, EPA, and Congress need to work together to ensure that collectively states have the resources, staff, and necessary tools to ensure full implementation of the SDWA. States cannot do it alone.

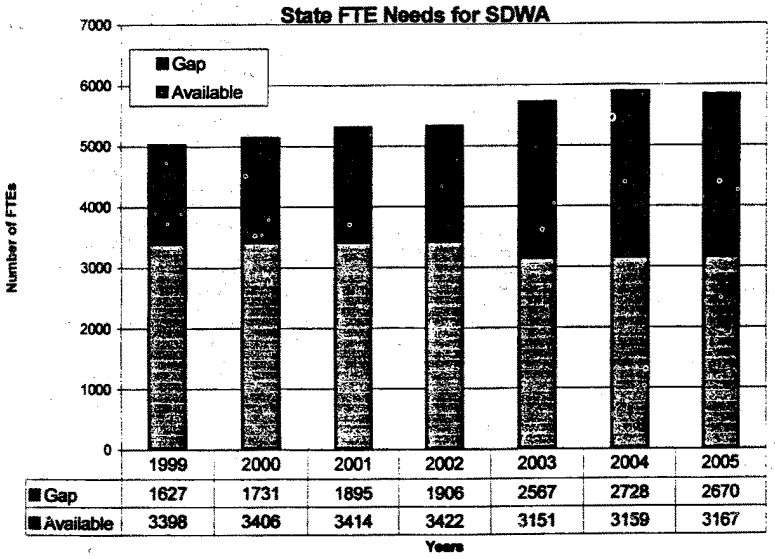
While quietly prioritizing and addressing the most critical implementation activities at the state and local level is the current reality, it is doubtful that this approach ultimately meets the expectations of the public and Congress. States do not want to see the gains that have been made over the last 25 years eroded due to lack of resources and implementation tools. The fundamental principles of the SDWA Amendments of 1996 are sound and, if correctly administered, have the potential to provide meaningful new public health protections. The states want the chance to succeed and they want the opportunity to help craft, as EPA's partners, the future direction of programs that will ensure the provision of safe drinking water in this country.

State PWSS Program Activities

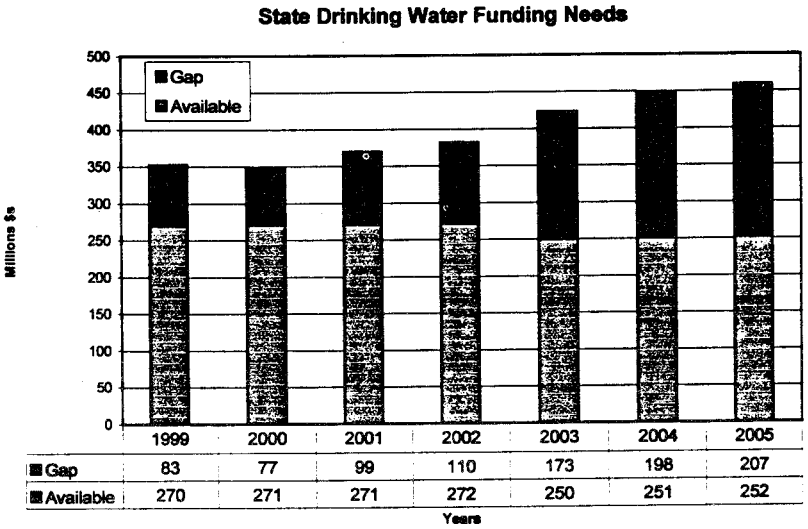
Pre-96	FY 00/01	FY 02/03
		6 Year Reg. Review
		CCL- New Rules
	National Cont. Occurance Database	Stage 2 Rules
	CCL	National Cont. Occurance Database
	Program Gap	CCL
	Arsenic	Program Gap
	Groundwater Rule	Arsenic
	LT1/Filter Backwash	Groundwater Rule
	Class V/UIC	LT1/Filter Backwash
	Radon	Class V/UIC
	Radionuclides	Radon
	Stage 1 & M/DBP	Radionuclides
	Capacity Development	Stage 1 & M/DBP
	Consumer Confidence Reports	Capacity Development
	Unregulated Contaminant Monitoring	Consumer Confidence Reports
	Source Water Assessment/Delineation	Unregulated Contaminant Monitoring
	DWSRF	Source Water Assessment/Delineation
Public Notification	Public Notification	DWSRF
Enforcement	Enforcement	Public Notification
Data Management	Data Management	Enforcement
Emergency Response	Emergency Response	Data Management
Disease Surveillance	Disease Surveillance	Emergency Response
Training	Training	Disease Surveillance
Sanitary Surveys	Sanitary Surveys	Training
Compliance Monitoring	Compliance Monitoring	Sanitary Surveys
Operator Certification	Operator Certification	Compliance Monitoring
Plan & Spec Review	Plan & Spec Review	Operator Certification
SS Contaminants	SS Contaminants	Plan & Spec Review
		SS Contaminants

SDWA'S Regulatory Schedule





	1999	2000	2001	2002	2003	2004	2005
Gap	1627	1731	1895	1906	2567	2728	2670
Available	3398	3406	3414	3422	3151	3159	3167



Mr. DEAL. Thank you, Mr. Rutherford.

Mr. Neukrug.

STATEMENT OF HOWARD NEUKRUG

Mr. NEUKRUG. Good morning, Mr. Chairman and members of the committee. My name is Howard Neukrug, and I am the director of the Office of Watersheds for the Philadelphia Water Department in Philadelphia. The Philadelphia Water Department is a municipal water, wastewater and stormwater utility serving around 2 million people in the Philadelphia region. I am here serving as the vice chair of the American Waterworks Association Water Utility Council. I am here today on their behalf. AWWA appreciates this opportunity to present its views on the implementation of the Safe Drinking Water Act amendments of 1996. You have our written statements.

I would like to begin my oral remarks with some good news. The good news is we are now in an era where we have the best quality water anywhere in the world, and it is better than any time in history.

We have a respected, credible drinking water profession and industry. We are customer driven. We are becoming more and more the stewards of the environment, particularly with the ground breaking efforts of the source water protection provisions of the 1996 act. We are partners in public health protection, consumer advocacy. We are professionals and we are dedicated to providing the highest quality of drinking water possible. We are providers of good quality service and communications and information and, with the consumer confidence report, even more so today than ever before, and we are providers of fresh healthy water.

Our problem is in the definition of what is healthy water and defining healthy water. From the 1996 Safe Drinking Water Act Amendments healthy water is defined by regulation: Occurrence in

health effects data, acceptable risk and risk tradeoffs, cost-benefit analysis.

Unfortunately, the promises of the 1996 amendments have not been fully realized. We hear more and more that sound science is in the eye of the beholder. We have consensus-driven definitions for healthy water, we see regulatory compromises. We need good science, good science that will be believed by the public. Final decisions on healthy water, there is no consensus and final decisions are deferred. Real or perceived dangers still lurk out there. There is low public perception of the quality of the drinking water and the expectations of the public. We have in place a staggered step-down series of regulations which has led to an unstable regulatory environment, no long-term vision and a reactive mode by the drinking water industry.

We want to emphasize that EPA has made a very good faith effort in many areas to implement the Safe Drinking Water Act Amendments of 1996. And the EPA Office of Groundwater and Drinking Water is to commended for its exemplary outreach and involvement of stake holders in the regulatory process. However, AWWA does have a major concern that EPA is not conducting the essential research and developing new data to support the drinking water regulations as expected in the 1996 amendments. Indeed, the use of best available, peer-reviewed, good science that is the foundation for the new drinking water standard setting process requires extensive drinking water research, particularly health effects research. Unfortunately, there has been a cycle in which critical drinking water research lags behind the regulatory process. We must break that cycle, and this can only be done through improved funding and planning. Long-range planning is needed to break the cycle of drinking water research lagging behind the regulatory needs. Since EPA has put a strong emphasis on meeting statutory deadlines, the results may be the promulgation of regulations without the good science that was envisioned in the 1996 act.

Before concluding, I will point out two other issues that are also in the written comments. The first one is the new Drinking Water State Revolving Fund. We are concerned that it will not adequately address the needs identified to comply with the safe drinking water regulations and upgrade drinking water infrastructure that is needed to ensure the high quality, safe drinking water to be provided to the American public in the future.

Our written statement also addresses AWWA's concern about MTBE in contaminated drinking water, an issue that cuts across several statutes in EPA programs. The AWWA recommends that Congress take swift action on legislation necessary to prevent further contamination of water supply by MTBE or other fuel additives and provide assistance to public water systems that have MTBE-contaminated water supplies.

Thank you, sir.

[The prepared statement of Howard Neukrug follows:]

PREPARED STATEMENT OF HOWARD NEUKRUG, DIRECTOR, OFFICE OF WATERSHEDS, PHILADELPHIA WATER DEPARTMENT, ON BEHALF OF THE AMERICAN WATER WORKS ASSOCIATION

INTRODUCTION

Good morning Mr. Chairman. I am Howard Neukrug, Director of the Office of Watersheds for the Philadelphia Water Department in Pennsylvania. The Philadelphia Water Department is a municipal water, wastewater and stormwater utility serving over two million people in the Philadelphia metropolitan area. I serve as the Vice Chair of the American Water Works Association (AWWA) Water Utility Council and am here today on behalf of AWWA. AWWA appreciates the opportunity to present its view on the implementation of the Safe Drinking Water Act Amendments of 1996.

Founded in 1881, AWWA is the world's largest and oldest scientific and educational association representing drinking water supply professionals. The association's 56,000-plus members are comprised of administrators, utility operators, professional engineers, contractors, manufacturers, scientists, professors and health professionals. The association's membership includes over 4,2000 utilities that provide over 80 percent of the nation's drinking water. AWWA and its members are dedicated to providing safe, reliable drinking water to the American people.

AWWA utility members are regulated under the Safe Drinking Water Act (SDWA) and other statutes. AWWA believes few environmental activities are more important to the health of this country than assuring the protection of water supply sources, and the treatment, distribution and consumption of a safe and healthful adequate supply of drinking water. AWWA strongly believes that the successful implementation of the reforms of the SDWA Amendments of 1996 is essential to effective regulations that protect public health.

EPA DRINKING WATER PROGRAM

The Environmental Protection Agency (EPA) drinking water program took on greatly increased responsibilities in the 1996 SDWA amendments. These responsibilities included developing a new regulatory process requiring additional science and risk analysis for regulations, creating a contaminant occurrence data base and methodology to select contaminants for regulation, promulgating regulations for arsenic, radon and microbial and disinfectant/disinfection by-products (M/DBP), identifying new treatment technologies for small systems, administering the newly created drinking water state revolving fund, and developing regulations and guidelines for consumer confidence reports, operator certification programs, source water assessment and monitoring relief.

In satisfying these requirements, EPA has involved the public in the regulatory process to an extent not equaled by any other federal agency and stands as a model for federal rule making. EPA has involved private citizens, scientists, drinking water professionals, medical professionals, public health officials, economists, and environmental and consumer advocacy representatives, as well as other experts, to provide recommendations on how to carry out these new regulatory responsibilities. The EPA Office of Groundwater and Drinking Water is to be commended for taking this exemplary approach for public involvement that should result in better regulations that protect public health.

However, AWWA does have a major concern that EPA is not conducting essential research and developing new data nor doing adequate cost-benefit analysis to support new drinking water standards as expected in the 1996 SDWA Amendments. There is also a long-term concern that the authorizations for the new drinking water state revolving fund will not be adequate to address the needs identified to comply with SDWA regulations and upgrade drinking water infrastructure to ensure that high quality safe drinking water is provided to the American people. In this statement, AWWA will focus on the research and infrastructure funding needs as well as highlight AWWA's concerns with the arsenic, radon, radionuclides and M/DBP rulemaking that illustrate some deficiencies in EPA rulemaking. Although it is not an SDWA implementation issue, this statement also will address AWWA's concern about MTBE contamination of drinking water—an issue that cuts across several statutes and EPA programs.

DRINKING WATER RESEARCH

The use of best-available, peer-reviewed good science as the foundation of the new drinking water standard-setting process under the SDWA amendments of 1996 will require extensive drinking water research—particularly health effects research. Unfortunately, there has been a cycle in which critical drinking water research lags

behind the regulatory process. We must break that cycle. This can be done through improved funding and planning.

The nation needs an integrated, comprehensive drinking water research program. EPA must develop research schedules that meet regulatory needs along with a research tracking system so that the researchers and their EPA project officers can be held accountable and Congress must appropriate the funds required to carry out timely research. Only with timely appropriations and Congressional oversight can EPA, the drinking water community and consumers work together to ensure that sound science yields the most appropriate regulations and practices possible for the provision of safe drinking water for all the people in America.

Drinking Water Research Funding

Funding for drinking water research is a critical issue. The 1996 SDWA Amendments require EPA to develop comprehensive research plans for Microbial/Disinfection By-Products (M/DBP) and arsenic as well as other contaminants. An estimated total of over $100 million is needed for the combined arsenic and M/DBP regulatory research plans alone and this figure does not include other needed drinking water research on radon, a whole array of other radionuclides, groundwater contamination, children's health issues, endocrine disruptors, and other new contaminants on EPA's Contaminant Candidates List (CCL) that will require additional occurrence, treatment, and health effects research.

In the past year, AWWA and other stakeholders worked closely with EPA to resolve any future research resource gaps beginning with the FY 2001 budget process. As a result of this cooperative approach to determining drinking water research needs, AWWA believes that the $48,872,500 requested in the President's Budget for FY 2001 is the absolute minimum necessary for FY 2001, (and may not be enough) to assure that the essential research will be conducted on which to base drinking water regulations as required by the Safe Drinking Water Act (SDWA).

Over the past several years, public water suppliers have worked together with EPA and the Congress to secure increased research funding for the nation's drinking water program. We believe that, through this cooperative effort, essential increases in research dollars have been obtained for drinking water over the past few years after several years of steady decline.

In August 2001, EPA will select at least five contaminants from the Contaminant Candidate List (CCL) and determine whether or not to regulate them. This process will be repeated every five years. To determine whether to regulate a contaminant and establish a maximum contaminate level (MCL) or another regulatory approach, EPA will need good health effects research. Recognizing the serious burden this regulatory mandate presents, the drinking water community has offered its time, resources and expertise to work with EPA to develop a research plan for the contaminants on the CCL.

Drinking Water Research Planning

Developing a comprehensive drinking water research plan is necessary. EPA finalized the first Contaminant Candidate List (CCL) in February, 1998, which contained 61 contaminants that could be considered for future regulations. Of these 61 contaminants, only 12 currently have adequate information to move forward in the standard-setting process. The balance of the contaminants (including such important contaminants as MTBE, triazines, and acetochlor) need additional health effects, treatment, analytical methods, and occurrence research. A comprehensive research plan for this large number of contaminants needs to be completed, peer-reviewed, adequately resourced, and then implemented. EPA has been working over the past couple of years to develop such a comprehensive plan. The total funding need for a comprehensive research plan is unknown at this time, but the amount is expected to be substantial.

AWWA has been encouraging EPA for the past several years, without much success, to develop a research plan to address the regulatory needs resulting from the Contaminant Candidate List (CCL). EPA's Draft Contaminant Candidate List (CCL) Research Plan attempts to fill that need, but misses the mark. The Drinking Water Committee (DWC) of the Science Advisory Board (SAB) recently completed a review of EPA's Draft Contaminant Candidate List (CCL) Research Plan. The DWC concluded that:

- The plan is not in the form of a plan, rather, it appears to be structured as more of a research strategy.
- The decision processes used in phases I and II are not transparent.
- The process of prioritization is the most important issue. The CCL Research Plan must develop practical priorities to determine the allocation of scarce resources that will maximize the protection of public health.

The vast majority of EPA's ongoing drinking water research is related to the M/DBP Cluster and arsenic. EPA has established innovative research partnerships with the AWWA Research Foundation (AWWARF) and the Association of California Water Agencies (ACWA) that has partially filled the research gap on these two issues. However, very little research is ongoing on other priority regulations such as radon, other radionuclides, the filter backwash rule, etc. While the research on the M/DBP Cluster and arsenic is important, these other priority contaminants and future contaminants for regulatory action cannot be neglected.

Long-range planning is needed to break the cycle of drinking water research lagging behind the regulatory needs. Assume that EPA will finish their overall contaminant research plan and have it peer reviewed by mid-2001. Then, EPA issues a research request, receives proposals, selects specific proposals, and contracts for the research. This process will take at least six months, so the research would not start until early 2002. Most research takes a minimum of two to three years to complete, with an added year for complete peer review, so the results would be available in 2006. The timing of this future research (which is based on a lot of optimistic assumptions)) bumps up against the statutory deadline for the second round of regulatory determinations in 2001. Since EPA has put a strong emphasis on meeting statutory deadlines, the result may be the promulgation of regulations without the good science that was envisioned in the 1996 SDWA Amendments. Long-range research planning efforts must be accelerated by EPA to breaking cycle of research availability only after regulatory decisions have been made.

Additional Drinking Water Research Improvements

Recently the National Research Council (NRC), an arm of the National Academy Sciences (NAS) recommended that the position of deputy administrator for science and technology be created within EPA to oversee research throughout the agency. AWWA has long contended that coordination of research in EPA needed to be improved. While EPA recently has begun to improve the quantity and quality of its science, a higher level of coordination is needed to ensure its effectiveness. The current position of assistant administrator for research and development does not have agency wide responsibility or authority to oversee all of the science needed for policy-making. AWWA recommends that the Congress give serious consideration to the NRC proposal.

AWWA also suggests that EPA work closely with other federal agencies such as the Centers for Disease Control and Prevention (CDC), the National Institutes of Health, the US Department of Agriculture, the US Army Corps of Engineers, etc., to leverage resources so that the research efforts can be maximized. The Congress and EPA need to continue to look for innovative research partnerships to get the job done, similar to what was developed for the M/DBP cluster and arsenic. Congress should also consider funding these partnerships for drinking water research independent of other environmental research to give the drinking water program, a public health program that affects every person in the United States, the priority it deserves.

DRINKING WATER REGULATIONS

While timely, best available, peer-reviewed good science is essential to intelligent regulatory decision-making, how that science and other data are actually used in decision-making is critical. AWWA is concerned about the scientific basis for some regulatory decisions. Incomplete or old science, although it is the "best-available" may still be inadequate science. Making regulatory decisions on inadequate science is not in accordance with the intent of the 1996 SDWA Amendments. The use of cost data and benefit assumptions appears to be arbitrary and capricious in some cases. The following drinking water regulations, either proposed or under development, illustrate AWWA's concerns that EPA rulemaking is deficient in following the requirements of the 1996 SDWA Amendments.

Arsenic

Arsenic research is too late to affect the final arsenic regulation. The 1996 SDWA Amendments required EPA to propose a revised arsenic regulation by January, 2000, and promulgate a final regulation by January, 2001. The 1996 SDWA Amendments also required EPA to develop a comprehensive research plan on low-levels or naturally occurring arsenic. The objective of the plan was to develop an extensive arsenic research program. The plan has been completed but has not yet been fully executed and the vast majority of the research results will not be ready in time to impact the regulation. The key issue for the arsenic regulation is that the health effects data and the results of the health effects research should have been completed by mid-1999 to meet the deadlines for the arsenic proposal in the

SDWA. Only five major arsenic health effects research projects were started by that time. Since EPA had not made a significant start on the bulk of the necessary health effects (which will take several years to complete), very little of the necessary research was completed in time to be used in developing the proposed arsenic regulation.

The lack of realistic prioritization of the arsenic research, from the AWWA viewpoint, has minimized the potential for the ongoing research to substantially reduce the uncertainty in the arsenic risk assessment. The ongoing research projects may (or may not) be the specific projects that could have the most impact in reducing that uncertainty, but nobody knows for sure at this point. AWWA is concerned that some of the ongoing research may simply lead to the need for more research rather than give answers that are meaningful for the regulatory process.

Data does not support an arsenic standard lower than 20 ppb. The National Research Council (NRC) conducted a comprehensive review of the arsenic risk assessment that was released last year. AWWA supports a reduction in the current arsenic standard, as recommended by the NRC, even though compliance will be costly for the public. In fact, AWWA has gone on record supporting a level of no less than 10 parts per billion (ppb) *if the science backs it up.* AWWA has publicly stated this position for nearly 12 months giving the Agency the benefit of the doubt that the critical questions regarding the uncertainties in health effects (many of which are pointed out by the NRC) could be answered prior to the publication of the proposed arsenic rule. Unfortunately, AWWA believes the Agency has been unsuccessful in satisfactorily answering these crucial questions. As documented in the detailed comments to be submitted by AWWA to EPA on the proposed rule, AWWA believes that a critical evaluation of the data that is presented by EPA in the proposed arsenic regulation convincingly demonstrates that 20 ppb is the MCL that maximizes health risk reduction benefits at a cost that is justified by the benefits. At a level of 10 ppb or lower, the health risk reduction benefits become vanishingly small as compared to the costs.

EPA has not credibly demonstrated a risk to the U.S. population to justify lowering the standard to the proposed level. AWWA has significant concerns regarding the basis upon which the proposed arsenic regulation will be promulgated. The proposed arsenic rule is incomplete, inconsistent, and inaccurate. The health benefits anticipated by this proposal are minute and open to scientific debate. EPA has significantly under estimated the impact of the proposed rule because it has failed to develop a logical methodology for estimating the costs and subsequently the benefits of the proposed rule.

One of the conclusions of the NRC study is that "Additional epidemiological evaluations are needed to characterize the dose-response relationship for arsenic-associated cancer and non-cancer end points, especially at low doses. Such studies are of critical importance for improving the scientific validity of risk assessment." Some of the ongoing research being conducted by EPA (in accordance with the Arsenic Research Plan) and work being conducted by the arsenic research partnership between the AWWA Research Foundation (AWWARF), the Association of California Water Agencies (ACWA), and EPA includes epidemiological studies that will address some of the NRC questions. The research will provide some of the answers for the risk assessment; however, none of these epidemiological studies will be completed until **AFTER** the arsenic regulation is finalized.

EPA has ignored specific recommendations for the arsenic risk assessment from the NRC report. The Executive Summary of NRC report states that "data that can help to determine the shape of the dose-response curve in the range of extrapolation are inconclusive and do not meet EPA's 1996 stated criteria for departure form the default assumption of linearity." The report goes on to state "Of the several modes of action that are considered most plausible, a sublinear dose-response curve in the low-dose range is predicted, although linearity can not be ruled out." Here the panel considers a sublinear dose-response curve "most plausible". It is AWWA's opinion that this whole issue of dose-response extrapolation adds enormous uncertainty to the standard setting process and makes high cost standards for arsenic in the single digits very unrealistic. The linear extrapolation used by EPA likely overstates the risk at low doses. The degree of potential over-estimation increases as the proposed MCL is reduced to lower and lower levels. What specific research does EPA have planned to address the issue of non-linearity in the dose-response curve? Will this data be available for the six-year review cycle?

In June, in a preliminary draft report, the Drinking Water Committee of EPA's Science Advisory Board (SAB) said that the available scientific evidence on arsenic's health effects could justify a standard of 10 ppb or even 20 ppb under the 1996 SDWA Amendments. This again calls into question the basis for EPA's proposed MCL of 5 ppb. The SAB Drinking Water Committee noted that there are uncertain-

ties associated with the use of old Taiwanese data to estimate the risks from arsenic and concluded that EPA may have misinterpreted the data and overestimated lung cancer risks. According to the draft SAB report, results from the Taiwanese and other studies should not be rigidly extrapolated to the U.S. population. Poor nutritional status in Taiwan, Chile, and India may have influenced the health effects. A 1999 study conducted in Utah found no evidence of either bladder or lung cancer at arsenic levels of 200 ppb, the report said. In addition, the report noted that studies conducted in animals have shown that deficiencies in selenium substantially increases the toxicity of arsenic. Urinary concentrations of selenium in the area of Taiwan were found to be between three and four micrograms per liter, as opposed to 60 micrograms per liter in the United States. The report also noted that there other nutritional factors which were not taken into account by EPA. These studies should not be summarily dismissed or used inconsistently by EPA is in the case of the proposed arsenic rule.

Clearly the scientific basis upon which to base such a revised arsenic standard is questionable at best. In light of the SAB draft report and the NRC study, the scientific data is not necessarily as strong as previously thought. EPA recognized in the recent abstract of the Utah cohort mortality study that the relationship between health effects and exposure to drinking water arsenic is not well established in the U.S. populations. EPA concluded that further evaluation of potential health effects in low-exposure U.S. populations is warranted. By its own admission, the Agency does not clearly understand the health effects issues as they relate to U.S. populations. Since the science on which to base an MCL of 5 ppb is questionable, how can EPA justify the high cost of the MCL?

The cost-benefit analysis is not adequate and does not meet the requirements of the SDWA. Even though EPA's own cost-benefits analysis concludes that the costs are greater than the benefits, the net negative benefit increases significantly when the appropriate costs, latency, and discounting adjustments are incorporated into the analysis. The net negative benefits become astronomical at the proposed arsenic standard of 5 ppb. Clearly, EPA doesn't understand the magnitude of their errors in the cost-benefit analysis, nor does EPA understand the magnitude of this proposal's impact on small communities. The proposed arsenic standard of 5 ppb literally has the potential to drive many small communities out of the drinking water business.

The inadequate cost-benefit analysis presented by EPA is particularly troubling in light of the cost-benefit flexibility that was specifically inserted in Section 1412(b)(6) of the 1996 Safe Drinking Water Act (SDWA) Amendments for situations just like this. The proposed arsenic regulation is the most compelling case to date for using this flexibility, however, there is no practical way to make public policy decisions without an appropriate cost-benefit analysis.

EPA invoked the cost benefit provisions of the SDWA to support the choice of an MCL of 5 ppb for arsenic. However, EPA did not employ a marginal analysis to justify this decision. EPA has not therefore performed a proper cost benefit analysis and has not complied with the SDWA. SDWA compliance inherently exhibits diminishing returns. As lower and lower treatment targets are considered, costs increase at an increasing rate while the increment of exposure reduction achieved diminishes with each additional increment of stringency. This relationship implies that there is a balance point where the marginal benefit obtained equals the marginal cost and net benefits are maximized. This is the right way to use cost benefit analysis to justify a decision. However, this is not what EPA did to justify the proposed arsenic MCL.

EPA discussed an aggregate comparison of total costs and benefits to justify its choice of an MCL. In this procedure, the more favorable relationship between benefits and costs from the first increments of additional stringency (i.e., moving from 50 ppb to 20 ppb) are averaged in with the less favorable data relating to the last increments (i.e., moving from 10 ppb to 5 ppb). EPA based its decision on a comparison of these aggregates (and other risk criteria of its own making). The SDWA specifically states that the incremental costs and benefits associated with each alternative MCL must be considered. EPA presents such values but provides no discussion of them and does not incorporate them into its justification, relying instead on aggregate cost benefit comparison and analysis of uncertainties on the benefits side. The aggregate comparison performed by EPA embodies a decision rule that is structured such that it will always over-shoot the economically optimal level of stringency that would be prescribed by marginal analysis. EPA's decision rule is arbitrary and has no standing in economic analysis. It is not a cost benefit analysis and does not meet the clear or implied intent of the SDWA.

The cost methodology presented in the proposal is incomplete and inconsistent throughout the proposal. The presentation of cost is arguably the worst

that AWWA has seen in any drinking water regulation. It is unclear how EPA developed the national compliance costs. EPA has not provided any estimates of total capital costs, which is unusual for a major drinking water regulation. Computing the total capital costs could have helped identify errors that are apparent in the O&M costs. In calculating the O&M costs, the amortized cost of the capital investment appears to exceed EPA's estimate for the total national cost (capital and O&M). In addition, EPA unrealistically assumes that many treatment plants will be able to dispose of their residuals waste streams to a sanitary sewer. The reality is that many wastewater plants will not accept these waste streams for a multitude of reasons, but primarily due to the increased Total Dissolved Solids (TDS). This assumption leads to substantially lower national compliance cost estimates than is likely to be the case.

AWWA has been looking closely at the cost numbers in the arsenic proposal and found significant discrepancies between the cost data referenced in the proposal and the numbers in the Regulatory Impact Analysis (RIA). When AWWA asked EPA to explain these discrepancies, EPA disclosed that the Unit Cost Curves (used to predict compliance cost based on the technology chosen and design flow) shown in the Technology and Cost Document were not the curves EPA actually used in the RIA. Without the actual Unit Cost Curves that EPA used, there is no way to verify EPA's national compliance cost estimates for a revised arsenic standard. The curves that were actually used have not been disclosed and without them (and supporting documentation) it is not possible to independently assess whether EPA used reasonable assumptions or to judge whether EPA's cost estimates are high, low, or on the mark. It is our understanding that EPA will publish on Notice of Data Availability (NODA) on the Unit Cost curves actually used, with all supporting documentation, and allow a full thirty day comment period on the NODA. This will allow others to assess how EPA developed its cost estimates and comment on their validity.

The AWWA Research Foundation (AWWARF) did an independent analysis of the costs of implementing the arsenic drinking water regulation at varying MCLs. The differences in estimates were significant. The differences are:

	5 ppb	10 ppb	20 ppb
EPA Estimate	$378 million/year	$164 million/year	$62 million/year
AWWA Estimate	$1.46 billion/year	$605 million/year	$55 million/year

These widely differing cost estimates need to be reconciled before the final rule is promulgated. AWWA and AWWARF are working with EPA to better understand the differences.

AWWA believes EPA should take the full twelve months between the proposal and promulgation of the arsenic regulation as provided by Congress through the 1996 Amendments to the Safe Drinking Water Act. The arsenic drinking water regulation was proposed June 22nd, and comments are due to EPA on September 20th. However, because the rule has been delayed and EPA has a statutory deadline to promulgate the final regulation in January 2001, AWWA is deeply concerned that EPA will not have sufficient time to evaluate comments and that an MCL based on inadequate science and cost and benefit data may be promulgated. EPA needs this time to critically evaluate the information received during this public comment period and make careful consideration to changes in the final regulation prior to its promulgation. AWWA believes that allowing a statutory deadline to drive imprudent public policy decisions would be unfortunate. If this occurs, the public will suffer from an untenable and unsupportable regulation of arsenic. Based on the information presented in this statement and comments submitted to EPA, the ethical action on the part of the Agency would be to retract their existing proposal and start afresh in a transparent stakeholder-based process to develop the drinking water standard for arsenic. Should the Agency decide to proceed on its current course of action, AWWA believes that the critical evaluation of the data presented by EPA in this proposed arsenic regulation shows that the prudent maximum contaminant level (MCL) that protects public health is 20 ppb.

Microbial, Disinfectant & Disinfection By-Products Cluster

This "cluster" of regulations is the most significant and potentially the most costly of all drinking water regulations required in the 1996 SDWA amendments. It includes Disinfectant/Disinfection By-Product Rules, Enhanced Surface Water Treatment Rules, a Filter Backwash Rule and the Groundwater Rule. The regulations in this "cluster" require substantial research, most of which will not be completed by the time indicated in the SDWA.

Disinfectant/Disinfection By-Products Rules (D/DBP): Research on microbial contaminants and disinfectants and disinfection by-products is a critical need. Each day there are roughly 50,000 deaths in the world attributed to microbial contamination of drinking water. Much of this threat has essentially been eliminated in the United States through disinfection of drinking water. However, it is now known that disinfection of drinking water can produce chemical by-products, some of which are suspected human carcinogens or may cause other toxic effects. Controlling risks from these by-products must be carefully balanced against microbial risks to ensure that when reducing disinfection levels or changing treatment to lower by-product risk, significant microbial risks are not created.

Research on disinfectants and disinfection by-products, as endorsed by the National Academy of Sciences and EPA's Science Advisory Board, is essential. The cost to the nation of microbial and disinfection by-products regulations under the SDWA will certainly be in the billions and could be as high as $60 billion or more depending on the final rule. An appropriate investment in health effects research will ensure that costs of regulation will be commensurate with the health benefit and not driven to extremes because of the lack of data.

Cryptosporidium is a microbial pathogen of major concern to drinking water supplies. The Centers for Disease Control, in correspondence with EPA, has pointed out that extensive research on the health implications of this pathogen and dramatic improvements in analytical methods for its detection are necessary before it is possible to evaluate the public health implications of its occurrence at low levels and determine the appropriate regulatory response. Adequate funding for research on *Cryptosporidium*, as well as other emerging pathogens, is essential to protect the health of millions of Americans.

Negotiated Rulemaking for Stage 2 of the D/DBP Rule: The negotiations on Stage 2 of the D/DBP rule were completed on September 7, 2000, and members of the FACA (Federal Advisory Committee Act) negotiating committee have agreed to urge their respective organizations to sign the agreement by September 29, 2000. The agreement is risk-based and involves a long-term treatment technique approach that is based on a measured and proportional response to raw water quality. This departure from the "one-size-fits all" approach is perhaps one of the most significant aspects of the agreement and will recognize watershed control and source water protection among the notable activities in a "tool box" approach to achieving the goals of the 1996 SDWA amendments to balance the chronic risk from DBPs and the acute risk of waterborne diseases from microbial contamination. The agreement allows for the use of ozone, chlorine-based products and ultraviolet light for microbial inactivation. AWWA will consider whether that the agreement fairly balances the competing public health concerns in an effective manner in deciding whether to sign the agreement.

Filter Back Wash Rule: The final Filter Backwash Rule was scheduled to be promulgated by August 2000. However, this rule has become a major concern since there is not much data on which to base a regulation and the potential for significant compliance costs and the rule has not yet been finalized.

For the Filter Backwash Rule, EPA assembled a collection of studies that appears to reflect 1,907 individual surface water samples. As presented, this assemblage cannot be directly related to drinking water sources. Few of these individual studies obtained positive samples and large data sets appear to be prone to lower observed occurrence than smaller data sets. Twenty-six of the studies either reported ranges of observation including zero or neglected to provide a range of observations.

Most disturbing is that the assembled studies did not include the most recent and comprehensive survey of drinking water treatment plant effluent water concentrations available from the Information Collection Rule (ICR) data collected over 18 months in 1997 and 1998. During that data collection process, public water systems serving greater than 100,000 persons collected monthly protozoan samples using an existing EPA approved method. The resulting data has been available to EPA since December 1999. The raw ICR data suggests that less than 7 percent of large public water systems use source waters that contain Cryptosporidium oocysts at detectable levels. Preliminary estimates from statistical models of this data indicate that the median oocyst concentration to be approximately 0.03 oocysts per liter rather than the values of 4.70 and 10.64 oocysts per liter cited by EPA in their proposal for the Filter Backwash Rule. After all the cost and time involved to collect this information under the requirements of the ICR, why is EPA discounting this most recent information?

EPA correctly points out the difficulties in performing Cryptosporidium analysis for filter backwash samples. Where recovery data are provided in the literature, the rates typically have been low. It is important to point out that the volumes analyzed have been very small due to high turbidity in the samples. It is not uncommon for

spent filter backwash samples to have equivalent volumes analyzed of much less than one liter. Therefore, the focus by EPA on high outlier levels of oocysts reported is unjustified. EPA is aware of the uncertainties of individual protozoan measurements and citing these outlier values violates the sound statistics that have been developed by EPA and others over the past several years to better understand protozoan data. The 1996 SDWA Amendments call for the use of "best available" science. EPA does not appear to be following this provision of the law in the Filter Backwash Rule.

Radon

EPA is under a statutory deadline to finalize the radon drinking water regulation by August 6, 2000; however, the rule has not yet been finalized AWWA has significant concerns about whether regulating radon in drinking water is cost effective—particularly the primary Maximum Contaminant Level (MCL) of 300 picocuries per liter. For the radon drinking water regulation to provide effective public health benefits, it is essential that states adopt a multi-media mitigation (MMM) program to abate radon in indoor air which is the primary threat to public health.

However, AWWA believes that there are some flaws in establishing the primary MCL. AWWA has repeatedly indicated to EPA our numerous concerns regarding the Health Risk Reduction and Cost Analysis (HRRCA) for radon. These concerns cover a wide range of issues such as life years saved estimates, latency times, discounting rates, cumulative costs of regulation, affordability, entry points to the distribution system, and treatment costs. Many of these factors can have a dramatic impact on the benefit-cost ratio. Depending on the assumptions, the cost-benefit ratio can vary from a high of 0.95, indicating a reasonable comparison of benefits to costs, to a low of 0.04, where the costs are clearly extreme compared to the benefits received.

The first and foremost issue is a policy concern in determination of when "benefits justify costs." Some Federal Agencies use a cost benefit ratio to justify an expenditure. The US Army Corps of Engineers, for example, uses a ratio of 1:2. Studies on the lead service line replacement portion of the Lead and Copper Rule show a dismal cost benefit ratio of 100:1. Prudent public policy dictates that federally mandated expenditures at the state and local level should have a ratio where benefits exceed costs.

Costs from the radon HRRCA show that it will have a devastating impact on small water systems, which are the majority of systems expected to take action as a result of the regulation. Simply looking at national costs, in aggregate, allows economies of scale for larger systems to mask the regulations affect on smaller systems. When one looks at the very very small systems category cost benefit ratios range from a disappointing 20:1 to 50:1. To make matters worse, benefits accrue locally in tiny increments. Again in the very very small system size, costs are estimated at $10,000 per year, with a corresponding 10,000-14,000 years between statistical cancer cases avoided. Clearly the primary MCL should take into account the regulatory impacts on small systems, which it does not.

The accounting of benefits in the HRRCA is inconsistent with common risk assessment and risk management principles. For example, risk assessment and management in the EPA's drinking water program typically assumes a 70-year exposure period. This implies that 1/70 of the benefits will appear in the first year after implementation, 2/70 in the second year and so on. The HRRCA grossly over estimates benefits by assuming that the full benefit of the regulation is realized in the first year, and succeeding years. The HRRCA should have been revised to reflect a phase in, or latency period, for benefits.

Also of concern is the failure of the HRRCA to account properly for time in the benefits estimate. The HRRCA discounts costs of a 7% annual rate, but does not discount benefits at all. This inflates the benefits estimate. Costs and benefits should be discounted at the same rate and the HRRCA should reflect this. AWWA estimates that the failure to phase in benefits and the failure to consider the timing of benefits shifts the cost benefit ratio from approximately 1:1 an to unfavorable 5:1, or even 9:1.

With the cost benefit ratios for the primary MCL shifting negatively, the multimedia mitigation program that Congress wrote into the 1996 SDWA Amendments becomes critical to providing a public health benefit. The EPA's 1994 Report to Congress placed the dollar cost of saving a life through a radon indoor air program at $700,000. This is almost ten times lower than the cost to save a statistical life through drinking water efforts on radon. AWWA supports the concept of the MMM program; however, AWWA has a significant concern that the MMM program in the statute and in the proposed radon regulation will not work as intended. There is little incentive in the SDWA for a State to adopt a MMM program simply to enforce the alternative MCL for radon rather than the primary MCL. In States that do not

adopt a MMM program for radon, the costs to drinking water consumers will be exorbitant with very little public health benefit.

AWWA urges Congress to provide incentives in the Indoor Air Radon Abatement Act for States to adopt a MMM program that would meet the requirements for a State to enforce the alternate MCL for radon. This would put the MMM program and requirement in the air program where it more rightfully belongs and provide resources for the States to successfully implement the MMM program. If all States have a MMM program, the alternate MCL will provide more public health benefit and at a more reasonable cost than the primary MCL. AWWA also believes that there should be a single standard for radon in drinking water based on the MMM since the major health threat is from air. AWWA recommends that the Congress address this flaw in the SDWA as soon as possible before the American people are faced with the exorbitant cost that would result from enforcing the primary MCL in the proposed regulation.

Radionuclides

AWWA, through its volunteers and contractors, has invested significant time and resources on the benefit-cost analysis (BCA) in the Notice of Data Availability (NODA) that was published on April 21st for the Radionulclides Rule. The BCA components, and the process to fit them together, used in the NODA are critical, as this is one of the first BCA conducted under the new provisions of the 1996 Safe Drinking Water Act Amendments.

At this time, AWWA does not believe that the BCA presented in the radionuclides NODA meets the requirements of Section 1412(b)(4)(C) of the SDWA. EPA simply put the costs in one column, and the benefits in another column to meet this requirement. AWWA believes that a much more robust BCA must be included in the final regulation, and the lack of a more robust BCA in the final regulation would be considered arbitrary and capricious and contrary to the clear SDWA language

Considerable mention is made in the NODA of the EPA "policy" that MCLs must be established such that individual lifetime cancer risks do not exceed a threshold of 10^{-4}. This notion that a maximum "allowable risk" (of 10^{-4}) is the ultimate binding constraint on EPA rulemaking—regardless of what the costs of the rule are, or how the benefits compare to those costs—is quite troubling.

Clearly, there is no statutory mandate or authority to have a self-defined and self-imposed Agency policy on an "acceptable risk" floor. The 1996 SDWA Amendments do not impose or envision such a constraint. Consider a case in which the cost of a potential MCL was not justified by its benefits, but where the estimated cancer risk at a less stringent alternative exceeded the 10^{-4} level. The NODA language appears to clearly state that the Administrator would be obliged to set the MCL at the unjustified level (to maintain a 10^{-4} risk ceiling) rather than follow the letter and intent of the statute and set a less stringent MCL that was indeed justified on a reasonable benefit-cost basis. EPA should explicitly clarify whether this indeed is its intent and interpretation of the statute. If this is the case, then the "acceptable risk" floor of 10^{-4} is more of a rule than a policy, and EPA should publish an "acceptable risk" proposal that allows for public comment on such a critical issue.

DRINKING WATER INFRASTRUCTURE

According to the EPA Drinking Water Infrastructure Needs Survey released on January 31, 1997, $12.1 billion is needed in the immediate future to protect drinking water supplies. Of this amount, $10.2 billion, or 84 percent, is needed to protect water from microbial contaminants which can produce immediate illness or death. According to the needs survey, between 1995 and 2015, a total of $138.4 billion will be needed to upgrade the infrastructure of the nation's water utilities to meet requirements of the SDWA. It is also important to note that this figure does not include other drinking water infrastructure needs, such as replacing aging transmission and distribution facilities, which are not eligible for funding from the Drinking Water State Revolving Fund (DWSRF).

In an independent analysis, AWWA estimates that the total drinking water needs, taking full account of infrastructure replacement needs, is on the order of $385 billion over a twenty year period. The Water Infrastructure Network (WIN), of which AWWA is a member, recently released a report that estimates that the total drinking water and waste water infrastructure needs over a twenty year period approaches one trillion dollars. AWWA will soon release a report that will outline the size and shape of the investment need for drinking water in the United States. The findings illustrate that the size of the need will vary from place to place, reflecting the age, character and history of the community. The AWWA report raises the questions that need to be addressed to determine how best to meet the Nation's drinking water infrastructure needs.

The report concludes that, in the aggregate, after accounting for the potential of best practices in asset management, research and new technologies, efforts to increase ratepayer awareness and support, and possible alternative compliance scenarios, in some utilities there still remains a "gap" between what is needed for infrastructure re-investment and what is practical to fund through water rates. This gap can be expected to grow over the next few decades as a reflection an infrastructure building boom years ago that will begin to reach the end of its useful life.

AWWA remains committed to the principle of full cost recovery through water rates as the essential under-pinning of local sustainability of water infrastructure. Longer term, the objective should be to flatten the replacement function and restore utilities to full cost recovery and financial sustainability.

AWWA does not expect that federal funds will be available for 100 percent of the infrastructure needs of the nation's water utilities. The DWSRF is a loan program with a state match. Ultimately, the rate-paying public will have to pay for the nation's drinking water infrastructure, regardless of whether financing comes from the DWSRF or other sources. However, AWWA does believe that DWSRF funding is a major issue for congressional oversight to ensure that federal funding is adequately available to meet the intended purposes of the SDWA. Over the next twenty years, it is clear that SDWA compliance requirements and infrastructure needs will compete for limited capital resources. Infrastructure needs and SDWA compliance can no longer be approached as separate issues. Oversight should take place in the context of the total compliance and infrastructure need and how the needs should be apportioned among the various financing mechanisms and sources.

There are a number of enhancements to the DWSRF that should be considered to increase its effectiveness, such as:

- increasing the authorized DWSRF funding levels to fund SDWA compliance projects and other needs.
- expanding the DWSRF to encompass system rehabilitation and replacement in addition to SDWA compliance as eleigible expenditures, allowing communities to take a more comprhensive approach to providing safe drinking water. As drinking water regulations become more stringent, upgrading the distribution system, like protecting drinking water sources, becomes a larger factor in maintaining the regulated safety level until the water reaches the consumer.
- Examining strategies for streamlining current operations of DWSRFs and strategies to encourage more innovative use of DWSRFs at the state level.

AWWA will provide a copy of the forthcoming AWWA report to members of the committee. We look forward to working with you to help resolve the Nation's growing drinking water infrastructure needs.

METHYL TERTIARY BUTYL ETHER (MTBE)

Although it is not the subject of this hearing, we believe that we would be remiss to not mention methyl tertiary butyl ether (MTBE) contamination of drinking water. MTBE contamination is an issue that cuts across the Clean Air Act, the Resource Conservation and Recovery Act (RCRA) and the Safe Drinking Water Act. MTBE contamination clearly illustrates the pitfalls of regulating within a statutory "stove pipe" and why coordination across programs is necessary within EPA.

The Clean Air Act of 1990 required that areas of the country with certain air quality problems use reformulated gasoline (RFG) with an increased oxygen content. MTBE is the oxygen additive most commonly used by the petroleum industry to satisfy the RFG mandate. Since MTBE is very soluble in water and does not "cling" to soil well, it has a tendency to migrate much more quickly into water than other components of gasoline. The use of MTBE has created a significant and unacceptable risk to drinking water supplies and groundwater resources. At levels as low as 20 parts per billion, MTBE makes drinking water unfit for human consumption because of taste and odor. It should also be noted that MTBE has been detected in the taste and odor of drinking water at levels as low as 2 parts per billion.

In Santa Monica, California, seven wells supplying 50 percent of the water for the city were shut down because of MTBE concentrations as high as 600 parts per billion. It is estimated that it will cost the city $150,000,000 to develop new water sources. This does not include the cost of remediation and treatment of the contaminated wells. Cases of persistent MTBE plumes extending for kilometer-scale distances in the subsurface have been documented in Port Hueneme, California; Spring Creek, Wisconsin; and East Patchoque, New York. Recent testing conducted by the US Geological Survey (USGS) shows MTBE has been found in approximately 20 percent of the groundwater in RFG areas. As many as 9,000 community water wells in 31 states may be affected by contamination from MTBE. The data was from one-third of the wells in those states and is generally representative of the entire nation.

Source water is being impacted from a variety of sources including pipeline leaks, spills, leaking underground storage tanks, and recreational boating on source waters.

According to the report of the EPA Blue Ribbon Panel on Oxygenates in Gasoline, a major source of groundwater MTBE contamination appears to be releases from underground gasoline storage tanks. The EPA Blue Ribbon Panel on Oxygenates in Gasoline recommended enhanced funding from the Leaking Underground Storage Tank (LUST) Trust Fund to ensure that treatment of MTBE contaminated drinking water supplies can be funded. The LUST funds could only be used for contamination resulting from leaking underground storage tanks. Since leaking underground storage tanks appear to be the major source of MTBE contamination in ground water, the LUST Trust fund is an existing option to consider as a source of potential funding assistance for some cases of MTBE contamination of drinking water supplies in circumstances that meet the criteria of the law. As part of MTBE legislation, AWWA recommends that Congress amend RCRA to clarify the use of the LUST Trust Fund to provide alternative drinking water supplies or treatment for drinking water sources contaminated by MTBE from leaking underground storage tanks. AWWA is very pleased that Senator Smith has addressed this issue in draft legislation circulated on June 13, 2000. We thank Senator Smith and other Senators and staff for their assistance on this issue.

In testimony before the House VA, HUD, and Independent Agencies Appropriations Subcommittee and in a similar statement submitted to the Senate VA. HUD, and Independent Agencies Appropriations Subcommittee, AWWA recommended that Congress appropriate at least $100,000,000 for LUST to accelerate the clean up of LUST sites with priority for MTBE contaminated sites to prevent contamination of water supplies. There is a backlog of about 169,000 LUST site clean ups. EPA and the States have put increased emphasis on monitoring for MTBE as part of the Underground Storage Tank (UST) program so the number of MTBE contaminated sites may increase. Eliminating leaking tanks is an immediate remedy to protect drinking water supplies from further contamination until MTBE is phased out or eliminated.

Congress appropriated $70,000,000 for the LUST program in FY 2000. The FY 2001 President's budget requests $72,100,000 for the LUST program. AWWA strongly believes that the requested increase is not sufficient to accelerate cleanups of LUST sites that are difficult to remediate because they are contaminated by MTBE. EPA's goal for FY 2001 to complete 21,000 LUST cleanups is commendable but not adequate to address the immediate needs of millions of Americans who no longer can drink the water from their wells. An aggressive, high priority effort is necessary to cleanup sources of MTBE from leaking underground storage tanks as quickly as possible. AWWA is pleased that the House Appropriations Committee increased the LUST appropriation to $79,000,000 for FY 2001; however, no additional funding was appropriated in the Senate. AWWA requests that the joint conference on the VA. HUD and Independent Agencies appropriations bill accept the House LUST appropriation.

Numerous bills have been introduced in Congress and draft legislation circulated that would amend the Clean Air Act to ban or phase out MTBE as a fuel additive. EPA has recently called for Congress to amend the oxygenate requirement in the Clean Air Act to ban or phase out the use of MTBE as a fuel additive. The EPA Blue Ribbon Panel on Oxygenates in Gasoline recommended action to amend the Clean Air Act to remove the oxygenates requirement and to clarify federal and state authority to regulate and/or eliminate the use of gasoline additives that threaten drinking water.

AWWA has developed the following legislative principles that will address the contamination of drinking water sources by MTBE:

1. Amend the Clean Air Act to significantly reduce or eliminate the use of MTBE as a fuel additive.
2. Ensure that air quality gains are not diminished as MTBE use is reduced or eliminated.
3. Require adequate research to be conducted on any replacement fuel additive for MTBE to ensure that a replacement will not contaminant drinking water sources.
4. Provide federal funding assistance to public water systems that have MTBE contaminated water sources for treatment or alternative water supplies.

AWWA recommends that Congress take swift action on legislation necessary to prevent further contamination of water supplies by MTBE or other fuel additives and provide assistance to public water systems that have MTBE contaminated water supplies. We look forward to working with the Congress to advance legislation addressing this critical issue.

CONCLUSION

We have covered a lot of issues in our statement today. Although much of the statement appears critical of EPA, we want to emphasize that EPA has made a good faith effort in other areas to implement the 1996 SDWA amendments. The agency's outreach and involvement of stakeholders in the regulatory process is to be commended. However, our concerns raised in how EPA uses science and cost benefit analysis in regulations are valid and are issues that bear watching by the Congress.

We look forward to working with the committee on MTBE and drinking water infrastructure issues. We thank you for your consideration of our views.

This concludes the AWWA statement on the implementation of the 1996 Safe Drinking Water Act Amendments. I would be pleased to answer any questions or provide additional material for the committee.

Mr. DEAL. Thank you, sir.

Mr. Tippin.

STATEMENT OF DAVID L. TIPPIN

Mr. TIPPIN. Thank you very much. Good morning, members of the subcommittee. I am David Tippin. I am director of Tampa Florida Water Department. We serve about a half a million people in the Tampa area with clean, safe drinking water. I am also a board member and recent President of the Association of Metropolitan Water Agencies, which represents the largest municipal drinking water agencies in the United States.

Thank you for holding this hearing. The subcommittee's commitment to a well run drinking water program that ensures safe, affordable drinking water for all customers is very clear.

I would also like to thank Chairman Bilirakis and Congressman Brown for agreeing to co-chair the Water Infrastructure Caucus. The drinking water and the waste water community is hopeful that the caucus will help resolve the overwhelming infrastructure needs faced by municipal water systems.

I would also like to thank Chairman Bilirakis for his leadership in defeating H.R. 623 and Congressman Pallone for his help during the markup in which the bill was defeated. H.R. 623 proposed to repeal important water conservation measures in the Energy Policy Act.

With regard to implementation of the Safe Drinking Water Act Amendments of 1996, I would like to commend EPA for its remarkable efforts. The amendments set out a demanding regulatory schedule and the EPA has made it a priority to meet that schedule.

State regulators deserve our recognition, too. The list of Federal regulations that States must implement has become larger and more demanding each year since the 1996 amendments were enacted. I might want to add, too, that most of the States, I know Florida is one of them, as I presume many of your States, are having funding problems, too, along with trying to meet budgets for these items, also.

The last time I testified on this issue was January 31, 1996. Our main concern then and our main concern today is the need to develop drinking water standards based on sound science. Congress shares this concern and enacted the sound science mandate in a bipartisan fashion in the 1996 amendments. AMWA is supportive of regulations that neither underregulate or overregulate. In other words, the Association urges EPA to develop regulations to protect health based on accurate health effects information.

Congress took a major step when it gave EPA the flexibility to let science determine drinking water standards. This is the cornerstone of the 1996 amendments and it recognizes that the most serious threat to public health should be addressed first because resources are limited at all levels of government. The mandate recognizes that the public, who must ultimately bear the increased cost of drinking water regulations, ought to receive true value for what they are being asked to spend.

Given this, the Association has a number of concerns with the agency on how the agency is incorporating science into the standard setting program. For instance, EPA recently finalized the maximum contaminant level of zero for chloroform, despite noting in the final rule that the best available peer-reviewed science indicated that a level above zero would have been more appropriate.

Also, EPA proposed a filter backwash rule while acknowledging the lack of sufficient scientific information to know what risk might be involved. It would be unreasonable to expect perfection given an ever changing base of scientific knowledge. Nevertheless, the importance of meeting the sound science provisions of the act must be stressed. Focusing on the deadlines of the act to the point of ignoring sound science provisions deprives the public of sensible cost effective regulations.

That is why in June AMWA made a request before the Senate Subcommittee on Wildlife and Water in testimony for a report by the General Accounting Office to determine how well EPA is fulfilling the Safe Water Drinking Act's sound science mandate.

Also, in the 1996 amendments Congress called on EPA to develop health risk reduction and cost analysis documents to be published for public comment at the same time the rule is proposed. With a straightforward analysis of risk and cost, the public will know the answer to a very basic question: What am I getting for my money?

So far EPA's cost and risk analyses are not published for comment in the Federal Register along with the proposed rule. Additionally, the analyses stray from normal cost-benefit practices. In some cases, EPA chooses to discount costs but not benefits. Thus, the agency compares what we in Florida know as kumquats to oranges. You may know them as apples to oranges.

This is why the Association has recommended an independent review of how well EPA's cost-benefit analyses conform to standard practices of the requirements of the act.

Thank you for the opportunity to provide this testimony today. We have enjoyed working with members of the subcommittee as well as Counsel Bob Meyers and Dick Frandsen, and I also look forward to working with you in the future to ensure safe, affordable drinking water for the Nation.

I would be happy to answer any questions you have.

[The prepared statement of David L. Tippin follows:]

PREPARED STATEMENT OF DAVID L. TIPPIN, DIRECTOR, CITY OF TAMPA WATER DEPARTMENT ON BEHALF OF ASSOCIATION OF METROPOLITAN WATER AGENCIES

Introduction

Good morning. I'm David Tippin, and I'm the director of the Tampa, Florida, Water Department. We serve nearly a half-million people in the Tampa area with clean, safe drinking water.

I am also a board member and recent president of the Association of Metropolitan Water Agencies ("AMWA"), which represents the largest municipal drinking water agencies in the United States.

Thank you for holding this hearing.

History

Since late 1996, when the Amendments to the Safe Drinking Water Act were enacted, the Environmental Protection Agency has developed a number of new rules and programs. These include a source water assessment program, a rule requiring annual water quality reports for consumers, an updated program for water systems to inform consumers of violations of drinking water regulations, and a loan program for drinking water systems.

One of the most important fundamental changes brought about by these Amendments is Congress directive to the Agency to rely on the best available, peer-reviewed science and supporting studies conducted in accordance with sound and objective scientific practices.

To meet the requirements of the 1996 Amendments, EPA is at work on a number of new rules. These include rules governing filter backwash, ground water disinfection, radon, other radionuclides and, most recently, arsenic. Also, EPA, water suppliers and environmental organizations have completed negotiations over the second phase of a rule to control microbes and the chemical byproducts of disinfection. And finally, EPA with the help of the National Drinking Water Advisory Council is establishing a process to determine other contaminants to regulate from the Contaminant Candidate List.

Support for EPA and the States

The last time AMWA testified on implementation of the Safe Drinking Water Act was before any major, new regulations had been issued under the 1996 revisions. The Act set out a demanding regulatory schedule, and AMWA commends EPA's Office of Ground Water and Drinking Water for its hard work. Also in previous testimony, AMWA strongly supported adequate funding for EPA's drinking water program as key to attaining the promise of the new Act. Today, we reiterate that support and call your attention to several areas of funding need.

AMWA's major concern, given the requirements of the Act for the use of sound science, is adequate drinking water research funding. Research is critical to ensuring that drinking water regulations address contaminants that actually occur in drinking water and that occur at levels of public health concern. This is important so that the limited resources at all levels of government—federal, state, and local—are directed at high-priority risks. It is also critical for the public, who must ultimately bear the increased costs of drinking water driven by new regulations, to receive true value for what they are being asked to spend. This year, EPA has requested nearly $49 million in drinking water research funding. AMWA believes that this is the minimum needed, and we urge you and your colleagues to support this request.

AMWA also would like to express its support for our state regulators. The Safe Drinking Water Act authorizes federal funding for up to 75 percent of state implementation costs. As the list of federal regulations that states must implement becomes larger and more demanding each year, federal support should rise, too. Seeking to ensure the Safe Drinking Water Act is implemented as per Congress intent, AWMA recommends that state primacy programs be funded at appropriate levels.

Lastly, we encourage Congress to support the authorized level of $1 billion per year, at a minimum, for the Drinking Water State Revolving Fund. This program assists water systems throughout the country in building facilities to meet the new requirements of the Act.

Areas Where Implementation Can Be Improved

We have already noted the remarkable amount of effort EPA has put into implementing the 1996 Amendments, but we would also like to express a number of concerns and to offer recommended actions. The Agency is already aware of these recommendations, as they appeared in AMWAs official comments on various proposed rules.

Source Water Protection. First and foremost, AMWA looks to EPA to better coordinate its various programs to prevent pollution of the nation's drinking water sources. It is more effective and more equitable to prevent pollution in the first place rather than rely on drinking water suppliers to install ever more complex and costly treatment to remove that pollution from the public's water. It is more effective for two reasons. First, no treatment technology removes all contaminants 100 percent of the time. Second, prevention at the source for many contaminants reduces threats to recreational use of water sources as well as the aquatic environ-

ment. It is more equitable, since preventing pollution at its source ensures that those responsible for it bear the costs of removal, rather than transferring those costs to drinking water system customers.

The case of MTBE, the gasoline additive approved by EPA under the Clean Air Act, provides an example of why coordination is needed. At the time MTBE was approved for use, EPA's scientists warned that, because of its characteristics, pollution of drinking water supplies was likely. The additive was nevertheless approved, and now we have extensive MTBE contamination of drinking water supplies. Consideration of drinking water concerns in the initial decision would have led to better results.

Indeed, the Clean Water Act and Safe Drinking Water Act offer many opportunities for coordination to protect drinking water sources.

The Use of Sound Science. The revised Safe Drinking Water Act stresses the use of sound science in developing and making regulatory decisions. As previously noted, AMWA has strongly supported increased research funding for drinking water to meet this purpose. Unfortunately, recent events have given all of us reason for concern. As you may know, EPA finalized a maximum contaminant level goal (MCLG) for chloroform at zero, despite noting in the final rule that the best available, peer-reviewed science indicated a non-zero value was more appropriate. EPA has now vacated the chloroform standard after a court ruling that the agency failed to use the best-available science.

More recently, EPA proposed a Filter Backwash Rule while acknowledging that they lack sufficient scientific information to know what risks might be involved, the effectiveness of current treatment, or the benefits that the public might receive from implementation of the rule. EPA's own Science Advisory Board has pointed out major deficiencies in the proposal.

While AMWA appreciates that the demanding schedule laid out in the Safe Drinking Water Act may lead to some oversights, we urge you to stress to EPA the importance of meeting the sound science provisions of the Act. We also recommend that Congress be open to changing statutory deadlines when there is reasonable expectation that additional, near-term information will better provide for the public's interests. Focusing on the mandated timelines in the Act to the point of ignoring its other provisions will not ultimately lead to the sensible, cost effective regulations the public deserves.

Health Risk Reduction and Cost Analyses. One of the most significant provisions of the Safe Drinking Water Act is the requirement for preparation of a Health Risk Reduction and Cost Analysis (HRRCA) document to be published for public comment at the same time a rule is proposed. AMWA believes that this document is a key public right-to-know provision of the Act. With a straightforward analysis of risks and costs, the public will know the answer to a very basic question, "What am I getting for my money?"

So far, the cost and risk analyses, with the exception of that for radon, have tended to be buried within a very long and complex Regulatory Impact Analysis. Moreover, the analyses are not published for comment in the *Federal Register* along with the proposed rule. Rather, HRRCAs must be obtained either from the rule docket or accessed via the Internet, and it is not clear that public comments are desired or whether they will even be reviewed and considered by the Agency.

A key component of HRRCAs required by the Act is an analysis of the "quantifiable and nonquantifiable health risk reduction benefits for which there is a factual basis in the rulemaking record to conclude that such benefits are likely to occur as the result of treatment to comply with each (maximum contaminant) level" (emphasis added). AMWA is concerned that several of the analyses to date have tended to rely, at least in part, on speculative ("what if") analyses.

Additionally, the analyses stray from normal cost-benefit practices. For example, EPA chooses to discount costs, but not benefits. Thus the Agency compares apples to oranges, which obfuscates whether the benefits of a rule justify the costs.

These are but a few of the problems that concern AMWA about how Health Risk Reduction and Cost Analyses are being conducted under the Safe Drinking Water Act. If these analyses are truly intended to inform decision-makers, then they must be very clear in addressing actual rather than speculative risk reduction benefits. And, if these analyses are truly intended to inform the public about the benefits they may receive for what they will pay, then the HRRCAs must be clear, straightforward, and easy to read.

Comments on Specific Proposed Regulations

Arsenic Rule. In June, EPA proposed regulating arsenic at 5 parts per billion (ppb), but will also be taking comment on 3, 10 and 20 ppb. EPA is required under SDWA to promulgate a final rule by January 2001. The 1996 Amendments also re-

quired that the National Academy of Sciences (NAS) conduct a review of EPAs arsenic risk assessment. The NAS report recommended that EPA revise the existing 50 ppb standard for arsenic downward as quickly as possible but did not recommend a specific level. The report also recommended that EPA conduct more studies of its arsenic toxicity analysis and risk characterization, conduct additional human studies, and identify markers of arsenic-induced cancers. The arsenic standard is a very complex issue, and the proposal rule will draw many valuable comments from stakeholders. Unfortunately, once the comment period closes EPA must finalize the standard only a few months later. We ask the subcommittee to consider extending this deadline by six months to give EPA more time to evaluate comments.

In addition, the Science Advisory Boards Drinking Water Committee was charged with reviewing the proposed rule for EPA. In a preliminary draft report prepared in August, the committee suggested that EPA consider setting the arsenic standard higher than the proposed level of 5 ppb. The committee noted that the available science might support a standard in the range of 10 to 20 ppb.

Filter Backwash Rule. The Act also required EPA to issue a rule governing filter backwash recycle practices by August 2000. The rule is likely to be finalized in the next couple of months. The rule is intended to address the concentration of contaminants in the drinking water treatment process resulting from cleaning of water filter beds. AMWA is concerned about the lack of scientific data that is available to support this rule. In the preamble of the rule, EPA acknowledges that there is a paucity of data available regarding the recycle practices of filter backwash.

Radon Rule. EPA was required to finalize the Radon Rule by August 2000. Reportedly, the Radon Rule likely will be finalized in December . Under the 1996 Amendments, Congress established the need for a mitigation program to reduce radon levels in indoor air. It is generally accepted that indoor air radon mitigation provides greater risk reduction than other methods of removal. Therefore, EPA developed a dual compliance regulatory approach: water systems may comply with an alternative maximum contaminant level (MCL) of 4000 picoCuries per liter (pCi/L) where the state, or the water system itself, operates an indoor air radon mitigation program. And where no mitigation program exists, water systems must either initiate one or comply with a primary MCL of 300 pCi/L. This approach is intended to attract water systems to participate in indoor air radon mitigation programs and thus achieve a higher risk reduction.

AMWA endorses the concept of addressing radon through multimedia programs that reduce indoor air risk. AMWA agrees that that indoor air radon mitigation provides greater risk reduction than does the treatment of drinking water. AMWA would like to see the Radon Rule refocused on encouraging states to adopt the multimedia program option and reducing the burden on water systems to develop their own indoor air program or be forced to comply with the maximum contaminant level.

Infrastructure Challenges

A recent report by the Water Infrastructure Network (WIN), which is comprised of water suppliers, city officials, environmental organizations, and state agencies, shows that drinking water agencies spend roughly $13 billion per year on infrastructure to protect public health. But according to the report, that amount is only about half of what may be needed. The WIN report indicates that approximately $11 billion more per year is needed through 2019. EPA's recent "gap" analysis and a report by the American Water Works Association confirm this overwhelming shortfall.

AMWA member agencies are exploring every avenue available to fund this anticipated future need. The vast majority of large municipal water systems currently fund 100 percent of their infrastructure as well as 100 percent of all federally mandated treatment requirements. Public Agencies have embraced public-private partnerships and private investment where it makes sense from a local perspective. We have adopted new efficiencies and streamlined our process. In short, we attempt to run our agencies not only as public services, but as businesses, too.

AMWA is currently working with local governments, other water supply associations, state groups as well as the environmental community to assess the need and to develop appropriate funding solutions. AMWA is committed to evaluating all possibilities for future financing, and as we proceed, will keep the subcommittee apprised of any financing options that impact the long-standing partnerships we have had with the federal government.

Methyl Tertiary Butyl Ether (MTBE)

AMWA urges swift action on the part of the subcommittee and Congress to pass legislation that significantly reduces or eliminates the use of MTBE to prevent further water contamination, to assist water systems where supplies are contaminated,

and to support development of treatment technologies to remove existing contamination.

Water systems in at least 31 states have detected MTBE in their wells or surface sources. As you know, the primary sources of contamination are leaking underground gasoline storage tanks, although there is concern that air deposition is another source. Since MTBE is very soluble in water and does not cling to soil well, it has a tendency to migrate much more quickly in water than other components of gasoline. MTBE renders drinking water unfit for human consumption due to strong taste and odor levels, even at levels as low as 2 parts per billion. Most consumers perceive drinking water with an unpleasant taste or odor as being unhealthy, and in some cases the water may very well be unsafe to drink. The bottom line is that consumers will not tolerate MTBE in their water.

This concludes the association's testimony.

Mr. BILIRAKIS. Thank you, Mr. Tippin.

Mr. Olson.

STATEMENT OF ERIK D. OLSON

Mr. OLSON. Thank you and good morning. I wanted to just note we have several recent reminders of why the discussion today is so important. Many of you may have read about the Walkerton, Ontario waterborne disease outbreak that killed several people earlier this year and the upState New York outbreak that occurred from E. coli where a child was killed.

There have been several other recent outbreaks of waterborne disease in the United States that serve as a reminder that although we have made enormous progress over the last century in drinking water protection, we still have a long way to go, and all the recent reports that were cited earlier today and other reports document that we have absolutely enormous needs for infrastructure improvement.

EPA estimated a couple of years ago that it is going to cost about $138 billion to upgrade our drinking water infrastructure, and more recent reports by the water utilities themselves, in coalition with others, suggested it is more like half a trillion dollars to upgrade it for capital alone, and if one considers operation and maintenance and capital and financing it is more like a trillion dollars over the next 20 years that will have to be invested. That is an enormous shortfall from where we are now, an enormous investment that will be necessary.

We thankfully are in the midst of what often has been called the third revolution in how water is provided in the developed world. The first was during Roman times when we started piping water. Around 100 years ago we started using chlorine and treatment to remove the particles in our water, and now we are on the cusp of an enormous change in how water is treated and delivered to protect our water sources: Upgrade how the water is treated, modernize the distribution systems, these pipes, some of which—in this room we are getting water from pipes that were in some cases built during the Lincoln Ldministration. We will have to upgrade those pipes all over the country. And then we are moving toward more public involvement and information about drinking water. All of those are very important improvements, and that is why some of the burdens on States and local officials have increased, but we think it is a wise and sound public health investment.

There are enormous challenges. Some of them specifically have been mentioned, such as arsenic. We wanted to highlight the fact

that the National Academy of Sciences last year had a consensus document that put to rest many of the arguments, in fact, virtually all of the arguments that have been made against making a much stricter standard. The consensus document said that the current EPA standard presents about a one in a hundred cancer risk. Just for the sake of comparison, that is 10,000 times higher cancer risk than Congress unanimously said was the highest cancer risk that would be allowed in our food from pesticides. It is an enormous risk. And even if you think the National Academy of Sciences is off by ten or a hundredfold, it is a much higher risk than EPA would ever allow in any other environmental medium or in drinking water. It is an issue that has to be addressed. We have procrastinated on it now for 58 years. The standard was issued during World War II and it hasn't been amended since then.

In addition, radon is a major issue. EPA has recently proposed a regulation that will start addressing radon in our tap water and allow States in a creative new program to tradeoff radon that comes in from the basement, reducing those risks, for reducing risks in drinking water. It is an interesting approach. We think the rule has some holes in it and it is a little loosey-goosey, but may improve public health protection.

Recently, a landmark agreement earlier this month was reached by all the groups at this table as well as EPA and others to reduce the levels of microbial risk from Cryptosporidium and disinfection by-products. That agreement should be ratified later this month by all these groups and hopefully we will see major improvements in health protection over the next decade as a result of that agreement.

Other major rules include the groundwater rule, which EPA will be completing shortly and recently proposed. We identify many enormous challenges that are ahead in our written testimony, but I just wanted to highlight a couple of them.

One of them is how in the world are we going to fund about a half of trillion dollars in infrastructure improvements over the next 20 years. Obviously we are not thinking that the Federal Government is going to foot the bill for all of that, but we need to have a national dialog on how we are going to deal with that and how we are going to get the public involved and excited about and interested in and concerned about this issue and get them involved in helping them fund it.

In addition, we need to be talking about how polluters who are causing some of the contamination will foot part of the bill as well. We think, as is identified in our testimony in more detail, there are several other important debates that will be moving forward over the next several years, but really this infrastructure improvement issue is going to have to dominate the debate and we commend the committee for moving forward in addressing some of these important issues.

Thank you.

[The prepared statement of Erik D. Olson follows:]

PREPARED STATEMENT OF ERIK D. OLSON, SENIOR ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL

INTRODUCTION

Good morning, I am Erik D. Olson, a Senior Attorney at the Natural Resources Defense Council (NRDC), a national non-profit public interest organization dedicated to protecting public health and the environment. We have over 400,000 members nationwide. We appreciate the opportunity to testify today on the implementation of the Safe Drinking Water Act.

Drinking water treatment improvements begun at the turn of the 20th Century have advanced public health protection enormously, but much of the nation's drinking water infrastructure now is aging and outdated. We must modernize our water systems and safeguard the nation's water supplies from new and emerging contaminants. While EPA has estimated based on state figures that the costs of modernization will exceed $138 billion dollars, many in state and local government, in the water industry, and public health and environmental communities believe the true costs of this needed massive upgrade will be many times higher.

For example, a report published in March 2000 by a coalition of state and local governments, the water industry, and water professional trade associations called the Water Infrastructure Network (WIN) estimated that building these costs would be far greater than previous estimates. The WIN report found that building new and replacing old drinking water facilities will cost $480 billion dollars (including finance costs) over the next 20 years, and that about $1 *trillion* dollars is needed for drinking water capital, financing, and operation and maintenance over that period. The WIN investigators concluded that there is a funding gap of about $15 billion per year for drinking water infrastructure, operation, and maintenance.[1]

Most of these expenses are expected to be necessary irrespective of Safe Drinking Water Act regulatory requirements. Aging pipes in distribution systems, antiquated water treatment plants, water professionals' recognition of the need for infrastructure improvements, public demands for improved water quality, taste, odor, and reliability, growth, and other factors, all will drive this investment. While most of these costs will be incurred with or without new EPA regulations, it is clear that many improvements will be necessary in water treatment and distribution systems in order to meet modern demands for safer tap water. Major new public investments will be needed to fund this important national priority, and to significant research initiatives are necessary to support and guide this modernization.

It recently has been recognized that the United States and other developed nations' drinking water suppliers have begun a "Third Revolution" in drinking water provision. It is this revolution that the WIN report has recognized will require greater financing. These revolutions can be summarized as follows:

- **The "First Revolution,"** occurred when water was captured, stored, and channeled or piped for household drinking and other uses. This important advance began in pre-biblical times in the Middle East and was expanded and refined by the Roman Empire.
- **The "Second Revolution,"** took place when coagulation, sedimentation, filtration, and ultimately chlorination were installed by many major water suppliers, beginning in the 19th Century and with widespread adoption by the first World War. This Second Revolution was triggered by the steady march forward of medical science, the acceptance of the "germ theory" of disease, and the leadership of public health proponents such as John Snow who in 1849 linked the London cholera outbreaks to water supplies. This resulted in enormous public health benefits, and has hailed by the Centers for Disease Control and Prevention (CDC) as one of the ten greatest triumphs of public health protection of the 20th Century.
- **The "Third Revolution"** in drinking water provision now has been launched by utilities in the U.S. and Europe. This revolution is the culmination and synthesis of the "multiple barriers" approach to preventing disease from drinking water that had long been advocated by Abel Wolman and other 20th Century water industry leaders. In essence, the Third Revolution consists of a four-pronged approach to modern drinking water protection:
  (1) vigorous measures to *prevent* contamination of drinking water, through source water protection;
  (2) adoption of modern, highly effective, and broad-spectrum water treatment technologies that can remove a wide array of emerging contaminants simulta-

[1] Water Infrastructure Network, *Clean and Safe Water for the 21st Century: A Renewed National Commitment to Water and Wastewater Infrastructure* (2000).

neously, such as membranes, ultraviolet radiation disinfection, and granular activated carbon with ozone disinfection;

(3) the modernization of aging, sometimes century- or more-old water distribution systems that often contain lead, are a frequent cause of main breaks, can harbor microbial growth, and, according to CDC, are a significant cause of waterborne disease outbreaks; and,

(4) The establishment and use of an efficient and open information infrastructure and public involvement approach in which utilities and their government regulators use advanced methods to monitor, assess, communicate, and engage in a dialogue with consumers regarding drinking water source water threats, and tap water conditions, contaminants, and quality.

Among the larger challenges now facing the water industry include:

1. Arsenic.

The National Academy of Sciences, in a report issued in 1999, recognized that arsenic in tap water poses a significant public health risk in the United States, and that EPA's outdated arsenic in tap water standard set in 1942 "does not achieve EPA's goal for public health protection and, therefore, requires downward revision as promptly as possible."[2] The Academy concluded that drinking water containing arsenic at the 50 parts per billion (ppb) level allowed by the outdated current standard "could easily" pose a total cancer risk of 1 in 100—about 100 times higher than EPA would ever allow for tap water under other rules. For the sake of comparison, the cancer risk allowed by this arsenic standard is about 10,000 times higher than EPA may permit in food under the Food Quality Protection Act of 1996, which Congress passed unanimously. It also is a cancer risk 100 times greater than EPA policy has allowed for drinking water contaminants for over two decades. The Academy also found that there was insufficient basis to find a threshold for arsenic carcinogenesis, and that there was no credible evidence that arsenic was a necessary nutrient for humans

Moreover, the Academy discussed a litany of other adverse non-cancer health effects from arsenic in tap water, including cardiovascular effects, nervous system problems, skin lesions, and possible reproductive and other effects. Several peer-reviewed, published studies completed in the year since the Academy's report have reinforced the conclusion that a much lower standard is needed for arsenic in tap water. For example, a recently published study showed increased cancer rates among Finns who consumed low levels of arsenic (below 5 ppb). Even more recently, three studies in the July 2000 issue of that National Institutes of Health's journal *Environmental Health Perspectives* that found that arsenic is linked to skin and other health effects even in populations that are well nourished, that arsenic is linked to certain reproductive problems in exposed women, and that cancer risks are increased among many people consuming tap water containing arsenic.

EPA in June 2000 published a proposal to reduce allowable arsenic levels from 50 ppb down to 5 ppb—a level that still presents a cancer risk higher than the 1 in 10,000 cancer risk that EPA traditionally allows in tap water. NRDC and many public health professionals and organizations believe that EPA should set the standard at 3 ppb, the level that EPA says is as close to the health goal (Maximum Contaminant Level Goal) as is feasible, considering costs, and is affordable.[3]

2. Radon

Radon in tap water poses significant cancer risks to over 40 million Americans. Another National Academy of Sciences report, issued last year, found that radon is known to cause cancer, and concluded that a multimedia mitigation strategy made the most sense in dealing with the radon problem. The Academy found that while radon can be present in tap water at levels posing substantial risks, on average na-

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[2] National Research Council, *Arsenic in Drinking Water,* p. 9 (1999)

[3] The underlying science supports an arsenic standard lower than 3ppb. EPA must consider that many Americans also have unavoidable exposure to arsenic in their food, so relatively low levels of arsenic in tap water can cause safety levels to be exceeded. A health-protective tap water arsenic standard should allow a maximum lifetime cancer risk no greater than that EPA has traditionally accepted (a level presenting a lifetime cancer risk from 1 in 1,000,000 to at most 1 in 10,000 for vulnerable or highly exposed individuals). This would require EPA to set a drinking water standard well below the current 50 ppb standard—in the range of 1 ppb. Limitations in the analytical techniques widely used for measuring arsenic in water, however, would likely necessitate a standard of 3 ppb, rather than a standard of 1 ppb, because reliably quantifying arsenic at levels below this would be difficult using current standard lab equipment and practices. Based on an extrapolation of NAS's risk estimates, even a relatively strict arsenic standard of 3 ppb could pose a fatal cancer risk several times higher risk than EPA has traditionally accepted in drinking water.

tionally the vast majority of radon risk comes from radon seepage into homes from soils.

Congress enacted a provision in the 1996 Safe Drinking Water Act Amendments that provides that states or water systems may adopt Multimedia Mitigation (MMM) programs for radon that focus on the highest indoor radon risks. States and public water systems with approved MMM programs need not assure compliance with the Maximum Contaminant Level for radon in tap water, and can instead meet a less stringent "Alternative Maximum Contaminant Level" (AMCL). The theory is that states will provide greater public health benefits by reducing overall indoor radon levels through a MMM program than would be achievable using only the MCL for tap water. EPA's proposed rule for implementing this provision, while in NRDC's view suffering from certain problems of lack of clarity to assure that the MMM programs actually will achieve the public health benefits billed, if improved could prove an important step toward protecting public health from radon.

3. Cryptosporidium, Other Microbial Risks, and Disinfection Byproducts

EPA has engaged in a lengthy, multi-stage process of negotiations over the past eight years with the water industry, states, local government, water treatment trade associations, public health groups, and environmental organizations in an effort to tackle the complex issue of microbial contaminants and disinfection byproducts. These negotiations have wrestled with how to control the parasite Cryptosporidium (which sickened over 400,000 people and killed over 100 in Milwaukee in 1993, and has lead to many smaller outbreaks since then). In addition, the issue of how to deal with risks introduced or exacerbated in the water distribution system was debated.

These negotiations have sought to produce an agreement that would improve protection from the class of contaminants known as disinfection byproducts, which are created when chemicals such as chlorine are used to disinfect water, but create unwanted byproducts as a result of chemical reactions between the disinfectant and organic matter in the water, creating a potentially toxic soup of chemicals that have been linked in both animal studies and epidemiological studies of people to certain forms of cancer and to reproductive problems such as miscarriages and certain birth defects.

It appears that after years of serious negotiations over the "Stage 2" disinfection byproduct rules, and the "Long Term 2" rule for surface water treatment, early in September 2000 we finally achieved a breakthrough in the negotiations, and an agreement has been reached. Senior leadership of all parties must approve the agreement in the coming week or so, but we are optimistic that the agreement will be ratified. A proposed rule is anticipated in early or mid-2001.

4. Groundwater Rule.

EPA also was charged by Congress in the 1996 amendments with issuing a rule requiring that groundwater supplied public water systems disinfect their drinking water, unless such disinfection were to be found unnecessary. EPA recently proposed a groundwater rule, upon which the public comment period recently closed. NRDC believes that the proposal includes several important measures that may improve public health protection, but also has several fundamental flaws that will need to be fixed if the rule is not to become bogged down at the state level.[4]

The 1996 SDWA Amendments should help to encourage better health protection, and EPA should be commended for the generally open public process used to date in implementing most of this law. There are several other important challenges:

- **The Need for a National Dialogue on How to Fund the Massive Funding Gap for Drinking Water Infrastructure Improvement and Modernization.** The massive shortfall in resources available for water systems to upgrade, replace, and expand their infrastructure is a problem that must be addressed.

[4] Among the major flaws of the proposed rule are: (1) Disinfection has become the last alternative. EPA has chosen to move from a position of requiring disinfection of ground water systems, with exceptions (where it can be shown that it is not necessary), to a position of not disinfecting a ground water system until almost all other options have been exhausted. (2) States do not have to set time limits for ground water systems to fix problems. (3) Ground water systems will not have to test for both pathogens and viruses. (4) EPA does not require sanitary surveys to be done frequently enough to find problems in time to correct them. (5) States may design Sanitary Surveys that vary widely in quality and oversight. (6) States are not required to have a cross connection control Program. (7) EPA does not establish a baseline list of significant deficiencies which states may exceed. (8) EPA should require public participation and Right To Know throughout the Ground Water Rule (9) The SWAP Should Be More Tied Into the Ground Water Rule. Though EPA advises States to take the SWAP process into account, we feel that EPA could do much more to formally tie source water assessments and the sanitary surveys together.

NRDC believes there is a need for a serious national dialogue on how this funding gap will be addressed. While certainly federal funding will not itself plug this massive hole, the time has come for a serious discussion of what the respective federal, state, and local governmental roles are, and what role private industry might play in this overhaul. We believe that there is a need for federal leadership on this issue, and for significantly increased federal resources to be dedicated to this crucially important national need.

- **An Assured Funding Mechanism, Such as a Modest, Dedicated Water Fee, Allocated to a Trust Fund Without Further Appropriation, is Needed to Support Long-Term Drinking Water Research and to Address High Priority Health Risks for Small Systems.** As part of a series of discussions with the water industry and others, NRDC and many in the public interest community (and frankly, some in the industry) have come to the conclusion that Congress should enact a modest water fee that would support a long-term guarantee of adequate research funding for drinking water. The funds raised should be set aside in a trust fund that is available without need for further appropriations, so that the research agenda is not buffeted by the ever-changing winds of the annual appropriations process. In addition, we believe that those funds should be made available for direct funding of the most substantial public health threats posed by drinking water systems, such as grants for emergency repairs, treatment, or consolidation of small systems with serious health standard violations.
- **A "Polluter Pays" Mechanism is Needed** to assure that consumers do not end up footing the bill for expensive monitoring and treatment when polluters contaminate source water. We recommend that the SDWA be amended (or that separate legislation be enacted) to enable public water systems or consumers to recover the full costs that source water pollution imposes on them in the form of increased monitoring, treatment, and other costs.
- **Appropriations Acts and a Court Decision Have Effectively Eliminated the Drinking Water State Revolving Fund (DWSRF) Set-Aside for Health Effects Research, Undercutting Funding Assurances.** This Committee and the 1996 SDWA Amendments adopted a provision in the DWSRF assuring a $10 million set-aside for health effects research, SDWA § 1453(n). The appropriations committees, however, have included provisions purporting to negate this set-aside in the last several appropriations acts. Unfortunately, a court decision—reached with the support of EPA—effectively found that the appropriations language overrode the set-aside in the Act. Thus, this Committee's effort to assure long-term funding of this research has been nullified by subsequent Congressional action. This Committee should fight for the full set-aside for this research.
- **A Forum for Open Public Research Planning and Priority Setting is Necessary.** EPA should formalize an open public process for developing its drinking water research plans, similar to the highly successful Microbial and Disinfection Byproducts Council, but with additional public comment and openness assured. This is a far more effective approach than the largely closed-door process EPA used in planning its arsenic research, for example.
- **Assuring More Effective Public Right-to-Know, Better Source Protection, More Affordable Advanced Treatment Technologies, Better Analytical Methods.** EPA needs to conduct further research and funding, and to take regulatory and other steps to build better public understanding of tap water challenges. The EPA right-to-know report rules issued in 1998 that required the annual reports to be issued beginning in 1999, are a major step forward. It is critical, however, that methods be developed to improve public understanding of these complex issues. Other important areas of research include: investigations into ways in which source water protection can be made a more effective tool for drinking water protection; research on how modern treatment methods can be improved and costs decreased; development of better, cheaper, and easier analytical methods; and improved approaches to assuring small system compliance through restructuring or treatment upgrades.
- **Research to Support Treatment, Occurrence, and Related Issues for Microbes, Disinfection Byproducts, Groundwater, and Distribution System Risks.** New standards will be issued over the next several years for many contaminants, yet EPA resources for research on the availability of treatment and on occurrence are inadequate. These rules will be determinative as to whether the "Third Revolution" in drinking water protection—involving true multiple barriers to contamination in the form of source water protection, advanced "leap frog" treatment technologies, and modern distribution system management—will occur in the early 21st Century, or whether the nation's

aging and often outdated water supplies will continue to inadequately address these emerging problems and to deteriorate. A stronger research commitment is needed.

- **Compliance Problems that Continue to Plague the Drinking Water Program.** Widespread violations of the SDWA, and inadequate state and EPA enforcement against even the most recalcitrant violators continue to be a major problem. Improved data collection and management, and a stronger commitment to enforcement, are crucial to assist EPA, states, and the public to address these issues. Compliance problems and data collection and management failures have been catalogued in a *USA Today* series published in October, 1998, in a recent EPA audit discussed in a front page *USA Today* article in late 1999, and in EPA's own 1998 and 1999 Annual Compliance Reports. The EPA drinking water program and states need to upgrade their management systems and programs. Routine audits of federally-funded state programs are a crucial part of this effort. The new SDWA small system viability provisions could begin to reduce these problems, but substantial additional resources and research are needed to assure that these programs bear fruit. Additionally, small system technical assistance should be granted on a competitive basis, based upon the best available research, so that these assistance providers demonstrate that they can deliver accurate technical assistance to small systems in a cost-efficient manner. We oppose "earmarked" assistance funding that is non-competitive, as it often fails to allocate resources so as to maximize health benefits.
- **Improved Data Management, Reporting, and A Comprehensive National Contaminant Occurrence Database.** EPA must work with states and the public to develop a fully integrated and fully automated joint data management system for the drinking water program. Included in this system should be accurate, reliable and real-time compliance, water quality, enforcement, and other key information. In addition, an effective National Contaminant Occurrence Database (NCOD) is needed that will require compatible data systems across states, electronic data reporting to EPA by states and testing labs, and sufficient will to ensure that national contaminant reporting is complete and timely. A well-organized NCOD will provide an essential national right-to-know counterpart to the consumer confidence or "right to know" reports that water utilities provide directly to their customers.
- **Better Integration of Clean Water Act and SDWA Programs.** While modest progress and much discussion have occurred in the effort to better integrate the Clean Water Act and SDWA programs, in fact we have a long way to go at the state and federal levels. It is an unfortunate historical and jurisdictional byproduct that hampers full integration of these programs and impedes progress. For example, EPA's source water assessments and protection programs, filtration avoidance programs, the groundwater rule, wellhead protection programs, sole source aquifer programs, and UIC programs under the SDWA, need to be better integrated with the CWA §§ 319, 305(b), and Total Maximum Daily Load programs have developed largely independent of each other. The Unified Watershed Assessment effort is beginning to make some headway in integrating these diverse programs, but a more aggressive effort would be helpful.
- **Meaningful Source Water Protection Authority.** Public water systems, states, EPA, and the public need to have the ability to protect, through regulatory mechanisms or other mechanisms as necessary, source waters. The 1996 SDWA Amendments largely punted on this issue, but creeping development and pollution are contaminating many source waters; strong legal authorities to prevent such contamination are needed.
- **Better Leveraging of Other Federal Agency Resources.** The federal government has a wealth of expertise and resources directly relevant to EPA's drinking water program that should be better integrated into EPA's efforts. For example, the Centers for Disease Control, Agency for Toxic Substances Disease Registry, and many of the institutes at the National Institutes of Health, including the National Cancer Institute, the National Institute of Environmental Health Sciences, the National Institute of Allergy and Infectious Disease, National Institute of Child Health and Human Development, National Heart, Lung, and Blood Institute, National Institute of Neurological Disorders and Stroke, and many other institutes and agencies conduct research of which EPA often is unaware. A better program is urgently needed to assure more information sharing and collaboration among the federal agencies. Some successful examples of such collaboration can be noted—such as the waterborne disease estimation research being jointly spearheaded by EPA and CDC, and the joint work on disinfection byproducts by EPA, ATSDR, and NTP. Perhaps more often, however, there is little or no collaboration among many of the agencies in priority

setting and in conducting research. The lack of coordination can result in serious lost opportunities, and potentially in duplication of effort.

- **Programs to Protect Consumers of Small Systems and Private Wells.** The United States may be moving towards a two-tiered water supply: higher quality water for consumers in larger cities, and lower quality water in small town and rural America. America's small water systems are often having significant difficulty complying with EPA's basic health standards, and as additional rules (such as arsenic and the groundwater rules) are issued, these difficulties will only increase. There is a need to develop a stronger program to assist and fund the restructuring, technical assistance, regionalization, consolidation, package treatment technology, and other approaches that will have to be adopted to assure that small water system customers receive safe and affordable drinking water. There also are 30 to 40 million Americans who get their water primarily from private wells not covered by the SDWA at all. Monitoring and protection of the quality of water in these wells is often spotty to nonexistent. A national dialogue is needed to discuss how these tens of millions of Americans' health can be better protected from contamination of these often highly vulnerable supplies.

CONCLUSION

In conclusion, NRDC strongly believes that EPA's implementation of the 1996 Amendments to the Safe Drinking Water Act is beginning to show signs of achieving substantial public health gains. Some of the most knotty, difficult issues that have faced EPA and the nation's drinking water supplies for the past quarter century since the original 1974 SDWA was passed, and in many cases for even longer than that, are now being squarely addressed. This process will not be simple, nor will it be cheap. But this effort is necessary to protect public health and to achieve public demands for a reliable supply of safe, good-tasting tap water for all Americans. A vigorous and well-funded EPA research and regulatory effort is crucial to the long-term success of the drinking water program and the nation's tap water safety. Only a long-term stable source of adequate funding will assure that this is achieved.

Mr. BILIRAKIS. Thank you very much, Mr. Olson.

Mr. Gloriod.

STATEMENT OF TERRY L. GLORIOD

Mr. GLORIOD. Good morning, Mr. Chairman. My name is Terry Gloriod. I am the President of Illinois-American Water Company, an investor-owned community water system serving a population of about 760,000 people in Illinois. I am also the Chairman-Elect of the Government Relations Committee of the National Association of Water Companies, NAWC, a nonprofit trade association that exclusively represents the Nation's private and investor-owned drinking water industry. I am offering testimony today on behalf of NAWC's membership, nearly 300 companies in 43 States that provide safe, reliable drinking water to over 23 million Americans every day.

Areas of concern that we have addressed in our written testimony include the proposed radon rule, the proposed arsenic rule, MTBE contamination of drinking water sources, implementation of the drinking water SRF by some States and drinking water infrastructure needs. I am going to limit my oral remarks today to these last two subjects.

On State revolving loan funds, when NAWC testified before this subcommittee in October 1998 we observed that 17 States had declared privately owned drinking water systems to be ineligible for drinking water SRF assistance through their constitution's statute or official policies. This unfortunate consequence is a clear and in many cases deliberate violation of congressional intent that SRF loans should benefit customers of all public water systems regardless of ownership. In fact, this intent was made explicit recently in

a letter to EPA from House Commerce Committee Chairman Tom Bliley and Appropriations Subcommittee Chairman James Walsh, who stated, "We believe it is clear that Congress intended such financial assistance to be available to all community water systems, including both publically and privately owned systems."

Unfortunately, the most recent data from EPA reveals that 23 months later the numbers of States ignoring congressional intent has remained at 17. EPA's State-by-State allocation of SRF funding is based on infrastructure needs surveys that include the needs of all utilities regardless of ownership. Those 17 noncompliant States are accepting Federal funds based in part on the needs of privately owned utilities in their States while refusing to allow those same utilities to apply for SRF assistance. Plainly put, this is discriminatory, not against the company but also against their customers, both of whom pay taxes that make these funds available in the first place.

We have urged EPA to base its SRF allocations on the needs of those customers that the States are actually willing to help. The funds forfeited by those States that refuse to comply would be reallocated to those who do.

Mr. Chairman, we very much appreciate your interest and support regarding this issue and that of Chairman Bliley.

On drinking water infrastructure, the 1997 EPA report estimated that the drinking water industry must invest $138 billion over the next 20 years to replace failing infrastructure. At that time, this amount actually exceeded EPA's total estimate of existing water industry assets. A more recent analysis by the American Water Works Association estimate total infrastructure needs to be $385 billion. When waste water needs are added, the number more than doubles.

The private sector stands willing and able to help with these infrastructure financing challenges. Creative partnerships should be encouraged and pursued so that municipalities can tap and pursue the private capital markets. If such partnerships were fully pursued, many cities and towns all over the country could successfully address many of their infrastructure financing shortfalls.

Some have responded to this challenge by calling upon Congress to consider massive Federal grant or trust fund programs. NAWC believes such a call at best to be premature. NAWC believes that the supply and delivery of potable water should be cost effective and should pay for itself, as is the case for electric, gas and telecommunications utilities. Consequently we need to find solutions that will assure that water utilities are economically viable in the future without subsidy.

In summary, if it is demonstrated that Federal assistance is warranted, NAWC would support narrowly targeted solutions that are economically efficient and equitable, include all utilities regardless of size and ownership, support innovation, assure that utilities are self-supporting over the long term and provide special assistance in economically depressed areas based on consumer needs.

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

These are long-term challenges and we look forward to working with this committee to achieve long-term solutions that will allow the drinking water industry to stand on its own two feet. We thank you very much for the opportunity to be here today, and we will answer any questions.

[The prepared statement of Terry L. Gloriod follows:]

PREPARED STATEMENT OF TERRY L. GLORIOD, PRESIDENT, ILLINOIS-AMERICAN WATER COMPANY

Good morning, Mr. Chairman. My name is Terry L. Gloriod. I am the President of Illinois-American Water Company, an investor-owned community water system serving a population of 760,000 throughout Illinois. I am also the Chairman-Elect of the Government Relations Committee of the National Association of Water Companies (NAWC), a non-profit trade association that exclusively represents the nation's private and investor-owned drinking water industry. I am offering this testimony on behalf of NAWC's membership—nearly 300 companies in 43 states—that provides safe, reliable drinking water to over 23 million Americans every day.

Mr. Chairman, NAWC commends you and your Subcommittee for conducting these oversight hearings on the implementation of the 1996 Amendments to the Safe Drinking Water Act (SDWA), the second such hearings by your Subcommittee since the Amendments were enacted. With its emphasis on public participation and right to know, and the requirements for sound science and cost-benefit analysis in the regulatory process, the 1996 Act represents a new paradigm for environmental legislation of which this Committee and Congress can be justly proud.

Although our statement expresses some concerns over current and future issues regarding the Act and the drinking water industry, NAWC believes that overall EPA has made a good faith effort to comply with the letter and spirit of the Act. In particular we wish to commend EPA for its timely implementation of the Consumer Confidence Reports (CCR) rule; its efforts to seek increased funding for scientific research through the FY 2001 appropriations process; its positive response to complaints about its SDWIS compliance database (although much still needs to be done); its efforts to implement the new Drinking Water State Revolving Loan Fund (DW-SRF) in an equitable manner; and the recently completed successful negotiations by the Stage 2 Microbial/Disinfection Byproducts Federal Advisory Committee.

Areas of concern that we wish to address today include the proposed radon rule, the proposed arsenic rule, MTBE contamination of drinking water sources, inequitable implementation of the DW-SRF by some states, and drinking water infrastructure needs.

EPA'S PROPOSED RADON RULE

NAWC does not believe that EPA's proposed MCL of 300 pCi/L, or any level below 1000 pCi/L, can be justified by cost-benefit analysis, especially for small companies. NAWC's California chapter, the California Water Association, has prepared a statement that documents in detail the deficiencies of EPA's cost estimates, and we would like to submit CWA's statement for the record of this hearing.

The cost differences between compliance with the proposed alternative MCL (AMCL) of 4000 pCi/L and 300 pCl/L can be huge. NAWC's largest company, American Water Works Company, estimates capital costs of $1.3 million for a treatment level of 4000 pCi/L compared with $134 million for a treatment level of 300 pCi/L, a 100-fold difference.

NAWC supports state-sponsored Multimedia Mitigation (MMM) programs as the most cost-effective way to achieve substantial health benefits through reduction in exposure to radon in indoor air. Furthermore, we believe that the prospect of water systems implementing local MMM programs in the absence of state programs is unrealistic. It is highly doubtful that the nation's public water systems, especially small systems, will have sufficient resources to achieve the goals of multimedia mitigation by themselves without state assistance. Tracking new home construction and remedial venting of existing homes is far removed from the chartered objectives of community water systems, not to mention the added burdens that would be placed on water ratepayers.

In summary, NAWC believes that nationwide implementation of effective state MMM programs is essential for the Radon Rule to achieve its intended goals. Otherwise systems will be faced with the very unattractive alternatives of implementing local MMM programs or meeting a very costly MCL which cannot be justified by

cost-benefit analysis. We urge Congress to consider legislation that would place the requirements of the MMM program in EPA's air program where it belongs and to provide states with sufficient resources to implement it. Effective MMM programs implemented in every state plus a drinking water AMCL (or MCL) of 4000 pCi/L will provide far greater public health benefits at a more reasonable cost than a drinking water MCL of 300 pCi/L standing alone.

EPA'S PROPOSED ARSENIC RULE

NAWC agrees with the National Academy of Science that the current arsenic standard of 50 ppb needs to be revised in accordance with the provisions of the 1996 SDWA Amendments. However we are not convinced that EPA's proposed standard of 5 ppb, announced June 22, 2000, can be justified.

- Earlier this year, in a preliminary draft report, the Drinking Water Committee of EPA's Science Advisory Board (SAB) concluded that the available scientific evidence on health effects could justify a standard of 10 ppb or even 20 ppb.
- The World Health Organization has an arsenic standard for drinking water of 10 ppb.
- According to the AWWA Research Foundation, the cost of compliance with a standard of 5 ppb is 2½ times that of compliance with a standard of 10 ppb.

NAWC urges EPA to reconsider the available body of scientific evidence and to consider a final standard of no less than 10 ppb.

MTBE CONTAMINATION OF DRINKING WATER SOURCES

The use of Methyl tertiary butyl ether (MTBE) as an oxygen additive in reformulated gasoline has created a significant and unacceptable risk to drinking water surface and groundwater sources in many areas throughout the United States. Recently EPA recommended that Congress amend the Clean Air Act to significantly reduce or eliminate the use of MTBE as a fuel additive.

Earlier this year NAWC joined three other drinking water Associations in urging Congress promptly to consider legislation that would:

- Amend the Clean Air Act to significantly reduce or eliminate the use of MTBE in gasoline.
- Ensure that air quality gains are not diminished as MTBE use is reduced.
- Require adequate research to be conducted on any replacement fuel additive to ensure that such a replacement will not contaminate drinking water sources.
- Provide assistance to public water systems that have MTBE contaminated sources for treatment or for alternative water supplies.

We urge Congress to take swift action to resolve this threat to our nation's drinking water supplies in accordance with these principles.

STATE REVOLVING LOAN FUNDS

When NAWC testified before this Subcommittee in October, 1998, we observed that 17 states had declared privately owned drinking water systems to be ineligible for DW-SRF assistance through their constitutions, statutes or official policies. This unfortunate consequence is a clear, and in many cases deliberate, violation of Congressional intent that SRF loans should benefit customers of all public water systems, regardless of ownership. In fact, this intent was made explicit recently in a letter to EPA from House Commerce Committee Chairman Tom Bliley and Appropriations Subcommittee Chairman James Walsh who stated, "We believe it is clear that Congress intended such financial assistance to be available to all community water systems, including both publicly and privately owned systems." Unfortunately, the most recent data from EPA reveals that, 23 months later, the numbers of states ignoring Congressional intent has remained at 17.

EPA's state-by-state allocation of SRF funding is based on infrastructure needs surveys that include the needs of all utilities regardless of ownership. Those 17 noncomplying states are accepting federal funds based in part on the needs of privately owned utilities in their states while refusing to allow those same utilities to apply for SRF assistance. Plainly put, this is discriminatory—not just against the companies but also against their customers, both of whom pay the taxes that make these funds available in the first place.

Some argue that privately owned companies, even those serving the public, should not receive federal assistance—not even loans. Congress considered that argument in 1996, and concluded that regulation by state public utility commissions would assure that the interest savings from SRF loans would benefit customers—not company shareholders. In fact the National Association of Regulatory Utility Commis-

sioners (NARUC) has joined us in criticizing the failure of these states to comply with Congressional intent.

We have urged EPA to base its SRF allocations on the needs of those customers that the states are actually willing to help. The funds forfeited by those states that refuse to comply would be reallocated to those who do.

In a letter dated June 9, 2000, responding to Chairman Bliley's letter, EPA Assistant Administrator J. Charles Fox acknowledged that EPA has the necessary authority "to base the allotment formula on needs that each state determines are eligible . . ." However EPA is concerned that such reallocation would have little or no impact in some states. We share those concerns, but they should not keep EPA from taking a reasonable first step that would help get SRF resources to all systems and customers that Congress intended to help.

Mr. Fox also describes in his letter several initiatives EPA has undertaken "to increase the comfort level of states in handling privately-owned systems." These are important efforts for which EPA should be commended.

Mr. Chairman, we very much appreciate your interest and support regarding this issue, and that of Chairman Bliley.

DRINKING WATER INFRASTRUCTURE NEEDS

A 1997 EPA report estimated that the drinking water industry must invest $138 billion over the next 20 years to replace failing infrastructure. At that time, this amount actually exceeded EPA's total estimate of existing water industry assets. A recent analysis by the American Water Works Association estimated total infrastructure needs to be $385 billion. When wastewater needs are added, that number more than doubles.

The private sector stands willing and able to help with these infrastructure financing challenges. Creative partnerships should be encouraged and pursued so that municipalities can tap and pursue the private capital markets. If such partnerships were fully pursued, many cities and towns all across the country could successfully address many of their infrastructure financing shortfalls.

However, some have responded to this challenge by calling upon Congress to consider massive federal grant or trust fund programs. NAWC believes such a call to be, at best, premature. In addition, if the water industry cannot meet the infrastructure challenge substantially on our own over the long run, we will have admitted that our utility models are not self-sustaining. In other words, NAWC believes that the supply and delivery of potable water should be cost effective and should pay for itself as is the case with the electric, gas and telecommunication utilities. Consequently, we need to find solutions that will assure that water utilities are economically viable in the future, without subsidy.

In summary, if it is demonstrated that Federal assistance is warranted, NAWC will be prepared to support narrowly targeted solutions that:

- Are economically efficient and equitable.
- Include all water utilities regardless of size or ownership.
- Support innovation.
- Assure that utilities are self-supporting over the long term.
- Provide special assistance in economically depressed areas based on consumer needs.

Mr. Chairman, we appreciate the leadership role that you and Congressman Brown have taken to address drinking water infrastructure problems, and we also appreciate the concern that you have expressed regarding the need for cost-effective solutions. These are long-term challenges, and we look forward to working with this Committee to achieve long-term solutions that will allow the drinking water industry to stand on its own two feet.

In conclusion, Mr. Chairman, NAWC very much appreciates this opportunity to present our views, and I would be happy to respond to any questions.[The statement of the California Water Association on the proposed National Primary Drinking Water Regulation for Radon retained in subcommittee files.]

Mr. BILIRAKIS. Thank you very much, Mr. Gloriod.

I want to apologize to Mr. Tippin. I wanted to be here, David, to introduce you. Anyhow, other appointments were made. People come down here and we have to break loose.

Mr. BROWN. He was real good, Mr. Chairman.

Mr. BILIRAKIS. Was he really good?

Mr. BROWN. It seems to me, Mr. Chairman, a whole lot of people from Tampa show up at these.

Mr. BILIRAKIS. Not too many as a matter of fact.

I would ask you, Mr. Tippin, you are responsible for running a large metropolitan water system. As was testified to earlier, about 90 percent of water systems out there are small water systems. So maybe you could tell us very briefly how the large water system is different from those smaller systems. In other words, how the problems of a large system are different than those of smaller water systems.

Mr. TIPPIN. I think the larger systems are more visible.

Mr. BILIRAKIS. They are——

Mr. TIPPIN. More visible to the media and everyone. We are probably more restrictive in what—I know my utility is—as in what we will allow as far as water quality is concerned. We try to hire the experts in not only the United States, but in the world as far as water quality is concerned, whether they be on staff or as a consultant to us, to address our problems that we have.

Like most of the panelists up here who represent utilities, we are a mature water utility. That means our infrastructure is aging. We have pipe—compared to Philadelphia, we are a baby, but we have pipe in our system which is in operation right now—I hope it hasn't broken—over 100 years old. We have pipe newer than that. Our problem is funding some of the infrastructure which was put in 50, 75 years ago which is failing and causing water quality problems. Water quality doesn't stop at the treatment plant. Water quality stops at the tap. But there is a big gap in there. In our case we have 2100 miles of water mains which we are responsible for, and a lot of that is aging, very old, and about 25 percent of our capital improvement budget right now is dedicated strictly to replacing that aging——

Mr. BILIRAKIS. Of course there are an awful lot of the small water systems that also have the same problems, Tarpon Springs.

Mr. TIPPIN. They have the same problems.

Mr. BILIRAKIS. They are a small water system, obviously, and I think their piping has been in there.

Mr. TIPPIN. Yes. One of the problems I think for a smaller system is financing for the smaller systems. They don't have the financing that the larger systems do have, and that is a major problem for them. And I know in Florida, we help each other out. The large systems help the small systems and vice versa. We are in it all together and we try to be one family as far as helping out the small systems. But some of the problems can be really aggravated in the small systems when—such as the technical staff—of which they aren't privy to as much as some of the larger systems are.

Mr. BILIRAKIS. Let's get into a specific, Mr. Gloriod, Mr. Tippin, whatever; for instance, EPA's proposed radon rule based on provisions contained in the 1996 amendments. Mr. Gloriod cited the broad concerns of your association and other associations about this rule. So I would ask you, can you give us a real world example of how you believe the rule could affect a small drinking water system? Because again it goes back to, how many times have I said it, we can change the standards, and I am not saying they should not be changed or they should not be tightened or anything of that nature. What I am saying is that if we can't put them into effect, then what the hell good are they?

Go ahead, sir.

Mr. GLORIOD. I think the general effects on small systems and on large systems are not very much different. But as Mr. Tippin has said, large systems generally have the capacity, if you will, to get the resources together to deal with the regulatory issues. The case of radon is particularly complex in that the exposure, the public health problem really isn't just from drinking water. It is a naturally occurring contaminant, and we really believe that the public health improvement requires more than just looking at the water. But just looking at the water can cause the need for treatment plants for radon removal. A small system may not have the land available to build such plants. That may be true with large systems as well. But the problem is more complex than just water. The issue comes down to costs and what customers can afford to pay as well.

Mr. BILIRAKIS. Well, thank you. I would ask all of you, my time has expired, if you have any suggestions, and EPA is in the room and hopefully I know they are taking notes on some of the things you have said, but if you have any suggestions on changes that may be made, real world changes that can be made to the—you know, we are still in the process of implementing the 1996 amendments. It is unlikely that we are going to substantially change the 1996 law in the near future because authorization does not expire until 2003. But in the interim we may be able to make some technical or targeted changes.

We had a press conference downstairs. Some of you were there. We have this caucus that has been created here, over 70 members. We feel we have some clout. Give us some real world practical type things that you feel can be helpful as far as getting States to implement what we intend to have them implement.

Mr. Brown.

Mr. BROWN. Thank you, Mr. Chairman.

I would like each of you, starting with Mr. Gloriod, to go on record for you and your organization on your position on the rider in the House, the HUD/VA bill that directs EPA to seesaw actions relative to the enforcement of the current, forgetting the stricter standards that Mr. Olson and others talked about, of the current arsenic drinking water standards. It came to a vote on the House floor. The rider was not stripped. Would you give us your position ?

Mr. GLORIOD. NAWC believes the current standard is not protective of public health and should be lower. We do not have a problem with compliance with the current standard of 50 at all.

Mr. BROWN. So you support the enforcement of current and want it stronger?

Mr. GLORIOD. Yes.

Mr. BROWN. Mr. Olson.

Mr. OLSON. We oppose the rider and believe the standard should be much stricter than it currently is.

Mr. BROWN. Mr. Tippin.

Mr. TIPPIN. This is new and we have no comment on it at this point.

Mr. BROWN. What was the first part of your answer?

Mr. TIPPIN. This is new and we do not have an answer.

Mr. BROWN. Okay. Mr. Neukrug.

Mr. NEUKRUG. The AWWA feels very strongly that EPA should be given a full 12 months to review the 270 comments that have come in so far.

Mr. BROWN. I am talking about the rider on the arsenic issue.

Mr. NEUKRUG. Yes. We believe that they should be given the full 12 months to review that and that it should—that the arsenic rider, at this point we are hoping it doesn't have to come to anything like that.

Mr. BROWN. That the rider, you believe that the current standard should be enforced then?

Mr. NEUKRUG. The current standard, at least the current standard should be enforced.

Mr. BROWN. Is that what you are saying?

Mr. NEUKRUG. For arsenic 50, yes.

Mr. BROWN. Mr. Rutherford.

Mr. RUTHERFORD. I am not familiar with this rider, until you mentioned it this morning at the press conference. But I think the consensus is clear that the current level of 50 is inadequately protective of public health and it should be lowered. I don't have an opinion on what that actual level should be.

Mr. BROWN. Lowered means strengthened?

Mr. RUTHERFORD. Yes, strengthened.

Mr. BROWN. Mr. Rutherford, 2 years ago Mr. Jerry Beaverstein was sitting in your chair representing the Association of State Drinking Water Administrators. At that hearing I asked him back in October 1998 to inform us of the percentage of local source water assessment programs under section 1453 that have actually progressed to the point where the boundaries of the assessment areas are delineated and the origin of the contaminants are fully identified. He responded that progress had not been all that impressive. It had been rather woeful, that he expected every system to be done by 2001. That was 2 years ago that he said that.

Where do we stand today in source water delineation and identification of contaminants?

Mr. RUTHERFORD. Mr. Brown, I am not prepared to address that on a national level but I could get that information for you as soon as possible. In my State at least we are making progress. I don't think we are moving as fast as we would like due to the constraints of obtaining resources, but we do have the delineations complete, at least for our community, and non-transient systems are making progress. I am recruiting staff right now to continue with that work.

[The following was received for the record:]

ASSOCIATION OF STATE DRINKING WATER ADMINISTRATORS
1025 CONNECTICUT AVENUE, N.W. • SUITE 903 • WASHINGTON, D.C. 20036
(202) 293-7655 • FAX (202) 293-7656 • asdwa@erols.com • www.asdwa.org

November 3, 2000

The Honorable Michael Bilirakis
Chairman
Health and Environment Subcommittee
House Commerce Committee
2125 RHOB
Washington, DC 20515

The Honorable Sherrod Brown
Ranking Member
Health and Environment Subcommittee
House Commerce Committee
2322 RHOB
Washington, DC 20515

Dear Congressmen Bilirakis and Brown:

On behalf of the Association of State Drinking Water Administrators (ASDWA), I would like to thank you for the opportunity for Jay Rutherford, Director, Vermont Water Supply Division, to testify before your Subcommittee on September 19, 2000. The topic of the hearing was state funding and Safe Drinking Water Act (SDWA) implementation. While the GAO report presented a picture of short-term adequate potential state drinking water funding, ASDWA is very concerned that the actual level of funding falls far short of current and future state implementation needs. Our testimony presented a number of current barriers and recommendations for how funding might be made more readily available to the states. I would be pleased to discuss these issues in more detail with you personally or one of your staff. If we are to achieve full and effective implementation of the SDWA, we must ensure that states have the funding and staffing resources to make this national commitment a reality.

As you recall, at the end of the testimony, a question was asked about the current status of state implementation of the Source Water Assessment Program. This is an example of one of the many new, and significantly resource intensive efforts included in the SDWA. ASDWA agreed to follow-up with the states to provide a snapshot of their current implementation activities and to identify potential barriers to full and effective compliance.

An e-mail was sent on September 19 to all states asking them to respond to the following four questions:

1) Where is each state in their delineation of source waters?
2) Where is each state in their assessment of sources of contamination within delineated areas?
3) What is the timeframe for each state to complete their delineations and assessments?
4) What barriers have states encountered that may prevent them from fully implementing this provision within the statutory timeframe?

Responses were received from 24 states including: AL, AK, AR, CA, GA, ID, IL, KS, LA, ME, MA, MT, NJ, ND, OH, OR, RI, SC, TN, UT, VT, VA, WA, and WY. The attached summary provides a short status update for each responding state and can only briefly touch on the intensity and details associated with implementing this program.

In reading through the summaries, it is important to remember that every state's program is different depending on the number of public water systems (PWSs) in each state; the status of previous assessment activities; the tools and staff that are available to the state; the amount of funding that is available; and how long each program has been approved by EPA.

The positive finding is that the vast majority of states that responded, plan to have their assessments and programs completed by the May 6, 2003 deadline. A number of barriers, however were identified that could affect full completion of activities by that date. These barriers include lack of

access to necessary tools such as databases and GIS, inadequate state staffing and one-time SRF set-aside resources necessitating the hiring of contractors rather than permanent state staff; and the need to balance meeting the deadline with ensuring the completion of high quality assessments that can be used for protection activities in the future.

Please call me at (202) 293-7655 if you have any questions about the information that has been provided. I look forward to working with you and the rest of the Subcommittee membership to ensure that the states have needed staffing and resources to make the goals of the SDWA a reality.

Sincerely,

Vanessa M. Leiby

Vanessa M. Leiby
Executive Director

Enclosure

State Status of SWAP Implementation

Responses Received from 9/19/00 e-mail

Prepared by the Association of State Drinking Water Administrators for the House Subcommittee on Health and Environment

11/03/00

Alabama

41% of community ground water systems have completed delineations.
35% of community ground water systems have completed contaminant inventory.
5% of community ground water systems have completed entire process including susceptibility analyses.

32% of noncommunity (NC) ground water systems have completed delineations and inventory.
2% of NC ground water systems have completed entire process.

36% of surface water CWSs and NCs have completed both delineations and susceptibility assessments.

Goal is to have all work done by October 1, 2002 to enable water systems to complete the last part – public information dissemination. The state estimates that they are on schedule for completion by 2003.

Barriers: initially consulting engineers did not use geologists that resulted in reports being unacceptable to the state – expertise was obtained by the consultants. All noncommunity ground water systems are being done by state staff during inspections. This required training and building confidence that has been a good but slow process. A number of large surface water systems have been doing such work for years and they are asking why they have to spend more money on reports/maps/inventory when everything is under control.

Alaska

State has completed statewide contaminant inventory database.
State is looking at 23 basins covering 1,790 drinking water sources. One basin has been completed and information will be available to the public through the program's website by October 5.

The state is planning to complete 100% (1,790 sources) of their public water system (PWS) assessments by 12/31/02 (may be optimistic). State needs to hire another position within the next month.

Barriers: the constant defense of the state's modeling method and overall plan to Region 10 EPA. State's position is that program is an EPA-approved state developed and implemented plan and EPA should let the state get on with doing their work.

Arkansas

State has completed 98% of the delineations for all systems in accordance with their SWAP plan.
State has completed 100% of database research and confirmed results with 60% of all systems.
Susceptibility analysis and assessments have been completed for all CWSs and NCWSs using river and impoundment sources.
Final assessment reports have been mailed to 5% of all systems. Assessment reports for transient noncommunity (TNC) and nontransient non-community (NTNC) river and impoundment sources have been drafted and are under review.
Systems using both surface and ground water sources have not yet been completed.

Delineations, assessments, and reports will be provided on the following schedule:

11/1/00 for NCWSs with river and impoundment sources
1/1/01 for all systems with spring sources
5/30/03 for all systems with well sources

Barriers: lack of information on well construction, especially TNC wells; lack of information and the time needed to gather it; the need to have to assume some well depth and aquifer information.

California

The state has completed 150 delineations out of 15,000 sources.
The states has completed 150 assessments out of 15,000 sources.
The state hopes to have all the work done by the timeframe defined in the SDWA, assuming an 18 month extension.
Barriers: hiring of staff to work on SWAP; the small number of available engineers and the fact that positions are limited-term (i.e. temporary) has made hiring difficult; developing necessary tools including mapping devices and training state and county staff has taken time.

Georgia

100% of surface water systems have been delineated; 40% of ground water systems have been delineated.

15-20% of assessments have been completed for surface water systems.
40% of assessments have been completed for ground water systems.

The state plans to be done by November 2003 for both ground and surface water systems.

Barriers: lack of personnel and lack of funding.

Idaho

250 CWSs and NTNCWSs have been delineated using state staff and contractor support. There are 2,900 drinking water sources in the state.
1,100 TNCWS sources have been delineated using GIS.

State has developed an automated potential contaminant source inventory process that can be supplemented by the water systems and collectively placed on a map outlining all potential sources of contamination. The results are forwarded to the state's automated susceptibility analysis program No specific information on status was provided.

The state believes it can meet the May 2003 deadline barring any changes to internal priorities withi the state or EPA.

Barriers: the largest barrier is being able to direct sufficient staff and resources to work on the SWAP program.

Illinois

The state has delineated 10% of their sources.
The state has assessed 10% of their sources.
It will take every bit (if not more time) to meet the May 2003 deadline.
Barriers: it will take considerable time and the approvals for hiring staff to complete the project on time.

Kansas

The state's program is in place but they do not yet have final EPA approval (outstanding issues deal with the public participation component, not the technical issues).

The state is currently conducting outreach to market the program and train third party service providers.
The state anticipates meeting the deadline with the 18 month extension.

Barriers: the primary barrier is the lack of state staff to assign to the program. Other barriers may emerge as the state begins conducting assessments.

Louisiana

The state has delineated 355 water systems out of 1,735 (20%).
The state has assessed 355 water systems out of 1,735 (20%).
The state anticipates being able to finish 100% of the assessments and delineations by May 6, 2003.
Barriers: specific barriers were not identified – just a reference to anything unforeseen happening.

Maine

The state has delineated 100% of all TNCWSs and NTNCWSs.
The state has delineated 75% of all CWS, the 25% remaining are ground water in bedrock.

The state has completed about 80% on the inventory for TNCs (questionnaire).
The state has completed about 50% of the remaining systems using GIS.
The state has assessed five pilot surface water sites, they are waiting for a database to be completed.

Barring further staff or funding difficulties, the state anticipates completing the assessment in mid to late 2002 for most supplies.

Barriers: Long and bureaucratic process to get interagency agreements and contracts approved; difficulties in hiring and retaining staff; lack of staff experience (one-half have been with the section a year or less).

Massachusetts

The state has delineated 100% of their sources and upgraded 40% of the protection areas

The state has completed 172 NCWS assessments, about 11% of their systems.

The state plans to have upgrades of their assessments done by April, 2001 and the time frame for completing all SWAP assessments is May 2003.

Barriers: no barriers were reported as long as expected funding levels are realized.

Montana

The state is treating delineations and assessments as a complete package. They have completed full reports for 10% of their CWSs, 5% of their NTNCWSs, and 3% of TNCWSs.

The state plans to complete all reports by mid-2003.

Barriers: The main barriers are time and limited numbers of technical staff. Given the resources, manpower, and workload, the state estimates that they will only be able to spend 9 hours per delineation and assessment report in order to meet the deadline.

New Jersey

The state has delineated 23% of CWS using surface water and 71% of CWSs using ground water. NCWSs are not yet delineated – the state is collecting GPS information on the 6,000 NCWS wells and three surface water intakes.

No sources have been assessed yet – the state is gathering information from multiple databases.

The state plans to complete the assessments by May 2003.

Barriers: delays in obtaining data from multiple databases in a useable and compatible format; the time needed to gather well construction and location data for the 6,000 non-community water systems.

North Dakota

The state has completed 68% of the delineations for CWSs using ground water and 5% of the delineations for CWSs using surface water.
The state has completed 8% of the delineations for NTNCWSs and TNCWSs using ground water and 0% of the NTNCWSs and TNCWSs water systems using surface water sources.

The state has completed 68% of the inventory evaluations for CWSs using ground water and 0% for systems using surface water.
The state has completed database inventories for 8% of the NTNC and TNC systems using ground water and 0% for systems using surface water.

The state plans to complete all determinations by May 2003 using state staff, PWS owners, and contractors.

Barriers: most difficult barrier is completing the database search involving database development and coordination within and between state agencies.

Ohio

The state has spent a significant amount of time in developing the program; creating a database that centrally locates key hydrogeologic data; linking 30 separate state and Federal databases into one user-friendly data source; and developing GIS tools for capturing site-specific potential contamination sources. These tools and automation are intended to improve the efficiency and consistency of SWAP assessments in the state.

Approximately 5% of the PWSs have been assessed.

It will be a challenge but the state plans to meet the May 2003 deadline, recognizing that the quality and utility of the data to maximize the return on source water protection is just as important.

Barriers: the state has a large number of PWSs (5,700) that presents a challenge due to the magnitude of the effort and the need to complete high quality assessments in a short period of time. Adequate resources to complete the effort are also critical. There is also a critical need to cultivate the active involvement of local stakeholders to make protection a reality.

Oregon

The state has delineated 37% of CWSs and NTNCWSs and 37% of TNCWSs.
The state has conducted inventories for 15% of the CWSs and NTNCWSs and 20% of the TNCWSs.
The state expects to have 70-75% of the assessments completed by 1/1/03.

Barriers: time needed early on for start-up, staff recruitment and training; software and hardware implementation; SWAP plan development and negotiation; and interagency team formation – all of which took more time and effort than anticipated. The state thinks it is critical to focus on a good quality analysis if the information is to have a meaningful purpose in promoting source water protection. The state foresees a possible need of an additional year and $500,000 to fully complete the project.

Rhode Island

The state has completed an initial recharge area delineation on 100% of their public water supplies. Of those supplies, 8% are undergoing a more refined delineation through a contract with the USGS.

The state has competed inventories on 12% of the CWSs and 10% of the NCWSs.

Results of the refined delineation work will be available by Fall 2002. Assessments, including distribution of results, will be completed by May 2003.

Barriers: data from neighboring states is frequently not available, and/or not entirely compatible. Publication and distribution programs are still being developed but the deadline will be met.

South Carolina

The state has completed delineations of 100% of surface water intakes and 75% of ground water wells.

The state is contracting out the contaminant source inventory work. The RFP was published in late September or early October.

Assessments will be completed by May 6, 2003.

Barriers: the state does not anticipate any barriers as long as the work can be done in the little time remaining and the set-asides from the SRF are sufficient. New resources will need to be made available after May 2003 for meaningful implementation of local protection plans.

Tennessee

The state has delineated 100% of their surface water intakes and 99% of their community ground water systems. 100% of all NCWSs using ground water have also been delineated.

The state has completed inventories for 28% of the surface water intakes although susceptibility analyses have not yet been conducted. Inventories have been completed for 96% of the community ground water systems, however only one susceptibility analysis has been completed. Inventories have been completed for 99% of the noncommunity ground water systems.

The state plans to complete its work by May 2003 but in light of the difficulties encountered in performing the susceptibility analysis, this date may be optimistic.

Barriers: state and Federal databases are not in a form that can be readily used in performing susceptibility analyses; a contactor is only doing the susceptibility analyses for surface water intakes and state staff are overwhelmed trying to do all of the ground water systems without sufficient,

meaningful access to Federal databases and information. Getting the assessments in a form readily useable by the public within the timeframe will also be very difficult. The GIS data needs to be internet accessible on map query based applications – tools that are not currently available to the division and department. The division does not have a fulltime GIS person on staff and is not getting GIS support from EPA. The only staff person versed in GIS has multiple other enormous responsibilities. Because the set-aside from the SRF was a one-time opportunity, the state has had to use the funds for contractor support rather than hiring fulltime permanent staff. There is currently not one dedicated staff member to source water protection activities.

Utah

The state has received 93% of the delineations from CWSs and has concurred on 62% of the submittals. The state has received 96% of the delineations for NTNCWSs and has concurred on 39% of the submittals. The state has received 17% of the delineations from TNCWSs and has concurred on 56% of the submittals.

The state has received assessment information from 91% of the CWSs and has concurred on 52% of the submittals. The state has received assessment information from 96% of the NTNCWSs and has concurred on 45% of the submittals. The state has received assessment information from 17% of the TNCWSs and has concurred on 49% of the submittals.

The state plans to meet the statutory time frame of May 2003 but this will depend on whether the remaining delineations and assessments are sent to the state and/or whether the state must conduct any of these activities for the systems that have not submitted reports.

Barriers: the primary barriers are manpower and money. Working with the systems to get them to submit reports or having to have the state conduct the work is another challenge.

Vermont

The state has completed delineations on 100% of the CWSs (this effort predated the requirements of the SWAP). Approximately 48% of NTNCWSs have delineations. 0% of the TNCWSs have been delineated.

As of June 30, 2000, 63% of the CWSs, 47% of the NTNCWSs, and 0% of the TNCWSs have assessments completed.

The state expects to complete this effort by May 2003.

Barriers: The major barrier the state is facing is hiring qualified staff in a timely manner.

Virginia

The state has delineated 100% of the PWS sources because they utilized a fixed radius approach.

The state has completed inventory evaluations for 26% of the CWSs and NTNC ground water systems and 45% of the surface water systems. 0% of the TNCWS have been inventoried.

The state has not yet begun work on susceptibility determinations.

The state is expected to complete SWAPs for community and NTNCWSs by July 1, 2002 and for TNCWSs by December 31, 2002.

Barriers: as usual are lack of funding and lack of personnel, however, the state will complete the SWAPs.

Washington

More than 92% of the CWSs and NTNCWSs have had wellhead protection areas delineated. Approximately 66% of the surface water watersheds have been delineated.

More than 92% of the CWSs and NTNCWSs have had inventory analyses completed. The inventory for surface water watersheds is still in progress and should be completed between February 2001 and October 2001.

The state expects to have 95% of the effort completed by October 2001 with recalcitrant systems taking somewhat longer to come into compliance.

Barriers: collecting and digitizing the data/developing a GIS data system is taking longer than anticipated. The success to date has been in large part because the state already had a mandatory program in place before the 1996 Amendments.

Wyoming

Wyoming does not have primacy (the only state) for the drinking water program. They are, however, encouraging water systems to voluntarily complete SWAPs – particularly CWSs and PWSs using surface water. Water systems serving about 75% of the state's population are currently participating in SWAP. The state submitted their program to EPA in February 1999 and expects to have formal approval by November 2000. The assessments will be completed by contractors within 42 months from date of plan approval. To date, approximately 300 noncommunity ground water systems have been delineated. Contaminant inventories will begin when delineations are completed.

Barriers: include funding and personnel. Priority will be given to CWSs and PWSs using surface water. Other systems that might want assessments may not receive them if the 1997 SWAP set-aside is not sufficient. State personnel restrictions have resulted in only 0.6 FTEs dedicated to the combined SWAP and WHP program.

Mr. BROWN. This subcommittee would like that information, if you would, and as you are representing the Association of Administrators, if you could give us some update on the progress that Mr. Beaverstein indicated would be made by next year. Okay.

Another question. You indicated that Congress and EPA need to ensure that States have the needed tools, the staff, the resources to work more directly and work closely with these water systems. What seems to be missing is the role that the States themselves can play to supplement funding and remove the various constraints on increased staff, resources that the GAO testified about on the first panel this morning.

Could you address what efforts you and your colleagues in other States are making at the State level?

Mr. RUTHERFORD. As I am sure you are aware, there are a number of competing priorities at the State level. We have analyzed the needs by the drinking water programs and have pursued obtaining increased State resources. In some cases, there has been some level of success.

It is a challenge from all counts in order to get sufficient staff, however.

Mr. BROWN. Thank you.

Mr. BRYANT [presiding]. Thank you. I have obviously assumed the Chair. I think it is my turn to question from the other side of the aisle. I will go ahead, with Mr. Green's indulgence, and come to him after I have finished.

Mr. GREEN. Sure.

Mr. BRYANT. Mr. Neukrug, on behalf of many who were in Philadelphia, I want to thank your great city for the hospitality you showed to us.

Mr. NEUKRUG. I hope you drank the water there.

Mr. BRYANT. I guess I did. I am still surviving. After Mr. Bilbray's comments, I have had three glasses of water this morning, and I don't know what to do. I think we will all be all right.

Mr. Rutherford, I have a question for you. You were here during the first panel's testimony. I want to contrast your statement with that of Assistant Administrator Fox.

Mr. Fox assured us that the agency has worked closely with the States and a range of other stakeholders to develop strong and practical new drinking water standards within tight timeframes established by SDWA amendments. My question is, I expect you would agree to the tight timeframe on the 1996 amendments. Given your testimony on the rule development and implementation complexities, would you agree that the EPA's rules have been practical?

Mr. RUTHERFORD. The agency has a difficult task in the promulgations that are being developed since the 1996 amendments. I think these are the really challenging ones and hard to address appropriately.

I would not—if I were proposing them, I would certainly simplify some of the approaches to them, to the degree that I could. My remarks were attempting to focus on the challenges of getting the attention of very small systems and then trying to help them determine what to do.

The degree to which they can be simplified, and particularly from my perspective that the burdens on the State should be as simple as possible—I would not agree that we have reached that point.

Mr. BRYANT. Mr. Tippin, a question for you.

The EPA indicates that it has involved stakeholders at every stage of the process in its rulemakings under the 1996 amendments. If this is the case, why do you have so many complaints and issues with the various actions that the agency has taken or failed to take?

Mr. TIPPIN. We have been involved in some of the issues, and I think our concern is with the sound science part. I mentioned earlier today on the peer review for chloroform and the recommended zero, I think the Scientific Advisory Board or one of the experts recommended 300 parts per billion.

I think something needs to be changed in that the Safe Drinking Water Act and the 1996 amendments have a non-backsliding rule that you cannot do that. It was set at a goal of zero. You cannot backslide into something, really, which is more logical.

I don't know what EPA can do about that, but I think, as we go along through implementing the 1996 Safe Drinking Water Act Amendments and regulating the contaminants and as we learn more from the science, I think maybe that should be changed and looked at.

Mr. BRYANT. For the remaining three panelists that I have not asked questions to, I would like, if you have an opinion on this, and I think some of you do on the drinking water research funding that we have, and some of you may be familiar with it more so than others, but if the other three of you, beginning with you, Mr. Neukrug, if you would comment on the adequacy of safe drinking water research.

Mr. NEUKRUG. I think research is really the key to all of this. I have a couple of quotes here. One is by Joe Cotruvo, who used to work with the EPA in the 1980's, who is still seeing the same issues come forward year after year in terms of safe drinking water. He says, "When will we know we have answered the question?"

I think that is really key here. No matter what we do, no matter where the arsenic level ends up, whether it is 2, 5, 10, 20, or remains at 50, at what point are we all going to be able to sit around the room and say, okay, the water is safe to drink now?

I am not seeing that, where this game ends and when we all will feel comfortable that the water quality is safe. I think research is what is needed in order to get us to that point.

Mr. BRYANT. Good point.

Mr. Olson.

Mr. OLSON. I just wanted to bring to your attention a couple of issues.

This committee set aside $10 million a year in the State Revolving Fund for drinking water health effects research as a result of a court decision and an effort to try to get that money set aside. Unfortunately, that money is not available, so that money that we thought was going to be there is not there. So, clearly, there is a shortfall, in our view, in funding for health effects and other research.

We think EPA could do a better job also of reaching out to NIH and CDC and some of the other Federal family to leverage some of the resources. We have discussed that in our written testimony.

Mr. BRYANT. Mr. Gloriod?

Mr. GLORIOD. I would like to echo and agree with the comments of my colleagues.

Also, I am a member of the American Water Works Association Research Foundation, and we try to focus the research dollars that are available from utilities in conjunction with those that might come our way from Federal sources to help drive the research, if you will, in a way that prioritizes the answers that are of most regulatory importance.

One of the difficulties we face is timing in that the questions are asked and we find ourselves on a regulatory time track that the research cannot necessarily keep up with.

So we really need, I guess, a more strategic long-range research plan that gets us pointed toward finding answers before we are on a scheduled regulatory process.

Mr. BRYANT. Very good.

Mr. Green.

Mr. GREEN. Thank you, Mr. Chairman. I am sorry our chairman is not here, because our first panel of EPA representatives—I noticed also three of our witnesses on the second panel—actually discussed MTBE, so, hopefully, I was not off the reservation, so to speak, in asking.

My concern is that what we have seen for a number of years is that we have a knee-jerk reaction on the Federal and sometimes at the State level, but at least on the State level we can respond quicker. But on the Federal level we all of a sudden go from one

headline to the next and do not realize the cost of unintended consequences.

Hopefully our regulators, whether it be EPA or our State level, would realize that when they either promote a substance, like we did with MTBE in the early 1990's, and now start to ban it, let us see what the next step would be.

So that is my concern. I wish we had EPA here on a regular monthly basis so we could get these questions answered. That is not always available.

Let me ask Mr. Neukrug a question. He mentioned a problem in the city of Santa Monica of having MTBE. We are aware of that from our earlier hearings. I assume the 600 parts per billion was a result of a leaky underground storage tank or tanks?

Mr. NEUKRUG. I could not give you that answer.

Mr. ROBERSON. Most of it, yes.

Mr. GREEN. Do you have any more recent data from the U.S. Geological Survey or the EPA on the remediation efforts in California, particularly Santa Monica, since that is where I stayed? We were out there for our convention, and I drank the water, just like Mr. Bryant did in Philadelphia. It did not smell any worse than anywhere else.

Are there any remedial efforts in California? Can you tell the subcommittee whether the problem is getting better or worse?

Mr. NEUKRUG. Do we have any data on that?

Mr. ROBERSON. It is about the same. They closed the wells that are contaminated.

Mr. GREEN. Do you know whether they have actually tried to deal with the leaky storage tank areas?

Mr. ROBERSON. Yes. We are having trouble getting a settlement with the oil companies involved.

Mr. BRYANT. I was going to recommend we get that.

Sir, would you identify yourself for the record?

Mr. ROBERSON. I am Alan Roberson, a representative with the American Water Association, and have been working closely with the city of Santa Monica.

Mr. GREEN. So it is about the same in the Santa Monica area or the California area?

Maybe you heard my information earlier to Mr. Fox. We have had a problem with regard to MTBE, particularly because of an explosion of a pipe across one of our water supplies for north Texas. The Texas Natural Resource Conservation Commission had collected 26,000 samples from nearly 6,500 entry points to drinking water distribution centers. MTBE was detected in 13 of those. Furthermore, the mean results of these detections is 2.6 parts per billion.

Do you or anyone on the panel have any comments? That is the information from our Texas agency, as compared to the California experience.

Mr. NEUKRUG. As we saw from the last answer I just gave you through Alan Roberson, I don't have the detailed information that you are seeking here, other than to say that the American Water Works Association is very concerned about the contamination of MTBE in drinking water. We note that it is a cross-jurisdictional

issue in terms of Washington, and we look forward to it being addressed quickly.

Mr. GREEN. Let me ask specifically, what about your experience in Philadelphia?

Mr. NEUKRUG. In Philadelphia, we have not identified MTBE in drinking water. We have a source water supply, not a groundwater supply, and have not found it at this point.

Mr. GREEN. Is Philadelphia using reformulated gasoline?

Mr. NEUKRUG. Yes.

Mr. GREEN. It is reformulated using MTBE or ethanol, if you know?

Mr. NEUKRUG. MTBE, I believe.

Mr. GREEN. Anyone else, the question concerning the Texas experience?

Mr. Olson?

Mr. OLSON. I would just want to add that if you are interested in the national picture, USGS has done a fairly comprehensive review.

EPA is pulling together the State-by-State data that is available, which I have been told will be available later this year or earlier next year.

Mr. GREEN. I always approach the issue of MTBE that I don't want to drink whatever makes my car run, whether it is MTBE or benzene, whatever.

I know the earlier testimony we had that MTBE actually stays longer in the water supply—it does not stay that much longer, because the information I have from north Texas with our lake, sure, other things evaporated or dissipated, but within a week or 10 days the MTBE—the smell and taste was also gone.

Is that what you have heard of? Again, this is just reporting. Is there any information on that?

Mr. Olson?

Mr. OLSON. There is information on persistence. It depends. In the ground, it persists longer than it does when it can volatilize, obviously. I think EPA is looking at that as well when they are developing their secondary standard.

Mr. GREEN. Mr. Gloriod, did you wish to comment?

Mr. GLORIOD. No comment, sir.

Mr. GREEN. Okay. Thank you.

Thank you, Mr. Chairman.

Mr. BRYANT. Let me thank the panel for being concise in your answers and very informative, and certainly you have been a great help to this committee, as well as the first panel.

This hearing is closed.

[Whereupon, at 12:12 p.m., the subcommittee was adjourned, subject to the call of the Chair.]

[Additional material submitted for the record follows:]

ASSOCIATION OF CALIFORNIA WATER AGENCIES

Testimony to the House Subcommittee on
Health and Environment
of the
Committee on Commerce
U.S. House of Representatives

By The
Association of California Water Agencies
September19, 2000

Mr. Chairman, members of the subcommittee, the Association of California Water Agencies (ACWA) is pleased to share with you the California water community's perspective on and some of its concerns with the implementation of the Safe Drinking Water Act Amendments of 1996 and the research performed to support that implementation. ACWA represents more than 440 urban and agricultural water utilities throughout the State of California, which deliver more than 90 percent of the water either supplied or distributed in California.

The water community generally hailed the passage of the Safe Drinking Water Act Amendments of 1996 as a major improvement in the foundation for regulating the nation's drinking water. Water suppliers, including most of our members, felt that at last we would have reasonable, flexible regulations, based on sound science that would protect drinking water in a cost-effective manner. We were further encouraged because the amendments directed that the regulators improve their public outreach program and that stakeholder participation be a significant part of the rulemaking process.

We believe it is a good time for a progress report, and thank you for this opportunity to tell you of some things that we think are going well and some things that, from our perspective, are not going well.

The protection of drinking water is enhanced by the State Revolving Fund in the 1996 Amendments, and EPA and the state have acted effectively to move these funds into communities that need the help in improving their systems. In addition, the Amendments provide for an operator certification program that will result in better trained operators to help ensure better quality water.

The U.S. Environmental Protection Agency (EPA) for the most part has been heroic in its public outreach and stakeholder participation efforts. There have been more public meetings and stakeholder workshops and more consultation with groups such as ours than ever before.

Even with this outreach, there is a concern within the California water community that a lack of sufficient resources for necessary research may result in EPA making regulatory decisions before receiving the benefit of sound science. This is especially important because sound science can indicate whether more or less scarce public resources are needed to achieve public health protections.

There are two on-going drinking water rulemaking processes that we particularly want to call to the Subcommittee's attention and where improvement is needed—those for radon and arsenic. We have conducted studies on both contaminants that indicate each has the potential of costing the people of our state billions of dollars. We have closely followed the processes involving these substances for most of this decade.

RADON

One of the hallmarks of the Safe Drinking Water Act Amendments of 1996, we felt, was the direction given by Congress for regulating drinking water in radon. Congress presented a provision that would enable the EPA to flexibly regulate the sources of radon causing the most harm to the public rather than focussing strictly on radon in water. Unfortunately, EPA did not take advantage of this unique opportunity.

In developing the 1996 Amendments, Congress recognized that the major health threat from radon is from inhalation of radon in the air and that water is a very minor contributor to radon in the air (only 2% of radon in indoor air). EPA has acknowledged this as well. However, the radon regulation, which EPA is set to finalize, proposes an unreasonably low standard for radon in drinking water. EPA rationalizes this number by providing an alternative, less stringent standard for compliance *if* a program to mitigate radon in air is implemented.

It is our strong opinion that EPA should implement a program that seeks to deal with the radon in air problem directly through programs to reduce radon in indoor air or mitigate in areas where it is high. Since radon in air accounts for 98% of all radon exposure, and EPA's ultimate goal is to establish mitigation programs for radon in indoor air, why not provide a program that directly attacks this health problem rather than beating around the bush? The program proposed by EPA allows water utilities the option of meeting a drinking water standard OR developing an air mitigation program. ACWA is intrigued by ongoing Congressional efforts to provide better public health protection than EPA's proposal. This proposal calls for a single drinking water regulation that tackles the majority of health concerns but directly implements an indoor air mitigation program. This scenario eliminates the choice of programs and deals specifically with the real health issues associated with radon.

The bipartisan effort in Congress to provide this sort of program should move forward. We have encouraged EPA to work with Congress to develop this program that will ultimately provide better health protection than the proposed regulation. We encourage EPA and Congress to work together to develop such an approach and if necessary, delay finalizing the radon rule until this legislation can be fully considered.

ARSENIC

We are equally concerned about the regulation of low levels of arsenic in drinking water. In June 2000, EPA proposed a new drinking water standard for arsenic at 5 parts per billion (ppb). EPA is also accepting comments on standards of 3, 10, and 20 ppb. The preferred standard of 5 ppb, if adopted, will result in the most expensive drinking water regulation to date.

Our studies have shown it will result in billions of dollars of costs for water suppliers in California. We were pleased when Congress recognized that this rule must be based on sound, peer reviewed science and that there are significant gaps in the science. The 1996 Amendments directed EPA to develop an arsenic research plan. Our Association concurred with that need and commenced a major fund raising effort to help fund arsenic health effects research. We raised $500,000 a year from the water industry for three years. The American Water Works Association Research Foundation (AWWARF) matched that each year with additional funds raised from the water industry. In addition, Congress appropriated federal dollars to match the money raised by ACWA and AWWARF—in some years two-to-one. ACWA, AWWARF and EPA then formed what is a historic partnership to get the most serious gaps in the science on arsenic health effects filled. The Arsenic Research partnership has funded several significant studies that are now underway. RFPs are out now for several additional studies. All together, 18 research projects will be funded. The water industry has appreciated the cooperation and participation of EPA.

We have reviewed the proposed regulation in depth and are extremely concerned about the following issues:

1. It takes time to complete and peer review scientific research. Little of this arsenic research funded by industry and federal money will be completed in time to impact the arsenic rulemaking if the current EPA schedule is maintained.
2. The Science Advisory Board (SAB) is set to issue a final report that strongly criticizes EPA's use of health effects research and cost considerations. It is important to remind ourselves of the purpose and importance of this scientific body. The SAB was created by Congress to act as an independent scientific body to review EPA regulations. The members of the SAB, most of them academia, were appointed by EPA itself. Thus, any reports issued by the SAB should be regarded with special attention. Unfortunately, this report will not be submitted until after the close of the formal public comment period and EPA is under no obligation to respond to its concerns. We recommend that Congress review this report as soon as it's available in order to better understand our concerns about this regulation.

3. EPA needs at least 6 more months to complete the regulation. In the 1996 amendments to the Safe Drinking Water Act, Congress deliberately provided EPA with a full year between rule proposal and a final rule. Because of the complexity and importance of this regulation, EPA missed the proposal deadline by 6 months. Now EPA is struggling to meet the final deadline of January 2001. With only 6 months remaining to adopt a final regulation, EPA will have to review all comments received, numbering possibly in the thousands, address substantial concerns raised by the SAB, and quite possibly perform some major revisions to the cost estimates and health benefits calculations. Keep in mind that by proposing a preferred standard and 3 alternatives, EPA is acknowledging uncertainty about which is the appropriate standard. To ensure comprehensive review, and consistent with the Safe Drinking Water Act, Congress should grant EPA at least 6 more months to adopt a final rule.
4. Given the degree of uncertainty inherent in the arsenic regulation at this time, EPA should consider setting an interim standard. Even if Congress grants EPA its deserved 6 month extension, only better cost estimates and altered health benefits assumptions can be made in this short time. The missing health effects research and new risk assessment, as recommended by the SAB, will not be available or completed for another year or two. Minus this needed work, EPA will only be able to "assume" the effects of arsenic at low levels, without any real proof. Assumptions of this sort could lead to costly investments in treatment with very little public health benefit. A lower interim standard could protect the largest population of people exposed to arsenic in drinking water but would also allow for the completion of confirming research before raising the rates of water consumers for possibly unnecessary treatment.

A little more time and we can have more confidence in the rule ultimately implemented—that it will provide the level of health protection needed and assurance that our limited financial resources are not being wasted. We hope Congress will concur with us in this need to make sure this potentially very expensive regulation is based on sound science and will provide EPA with direction to incorporate the important science already being funded and the authority to slow the process for that purpose.

MTBE

As of today, it has been 525 days since Governor Gray Davis petitioned the Environmental Protection Agency to grant California a waiver from the Clean Air oxygenate mandate. Governor Davis has yet to receive a positive response to his request, which is strongly supported by the water suppliers of California.

The California Department of Health Services announced August 2 that MTBE had been detected in 32 public water systems in 20 counties located throughout the state. The fuel additive has been found in 56 drinking water sources, including 35 ground water and 21 surface water supplies. There is a rapidly growing crisis in our state's drinking water supply.

This water supply contamination epidemic needs to be addressed immediately. Without a waiver, California will essentially be federally prohibited from using the most environmentally safe fuel possible.

We believe that it does not make sense to deal with air issues by creating water problems. EPA should have acted promptly, as did California, to implement a plan to resolve this problem. If EPA indeed lacks the authority to grant a waiver, as some believe, then we hope Congress will give EPA the ability to implement other methods to meet clean air requirements as quickly as feasible so that we can get this problem behind us. That is why ACWA supports Representative Brian Bilbray's common sense legislation, H.R. 11. We believe that it is time to act before California loses more wells and more sources of drinking water.

CUMULATIVE IMPACTS

ACWA is concerned by the problem of cumulative impacts of multiple rulemakings. It is

a problem that is not well understood and does not receive the attention it deserves from regulators. A good example is that EPA over the past year has been developing three rules that each will significantly impact groundwater resources—the arsenic, radon and groundwater rules. As near as we can tell, there is no coordination within EPA in the processes involved, and the rule managers apparently have little communication with each other—as was plainly shown when a groundwater stakeholders meeting was held in Portland, Oregon, at the very same time that an arsenic stakeholders meeting was being held in Monterey, California. There has been no cumulative cost-benefit analysis. The cumulative cost impact is likely to be huge, and the strain on California integrated water management plans could be significant and result in increased reliance on limited surface water supplies. We recognize that little guidance is provided to EPA in the Safe Drinking Water Act on this point, and that may be something Congress could correct.

We have focused in these comments on a few areas that cause us significant concern. We don't mean to imply that all is bad. On the contrary, the 1996 Amendments strengthened the Safe Drinking Water Act and provided a good framework for regulating drinking water. It established that drinking water regulations should (1) protect public health, (2) be cost effective (3) be based on sound, peer reviewed science; and (4) involve stakeholders and the public in the rulemaking process. Our intent is to show that there are some areas where the Act needs to be fine tuned to provide additional guidance to EPA and the regulatory approach of the 1996 Amendments.

The Association of California Water Agencies appreciates the opportunity we have had today to share our observations and concerns with the Subcommittee. We look forward to working with the Subcommittee, EPA and others so that we can continue to improve the regulation of drinking water in this country.

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