TESTIMONY OF BENJAMIN H. GRUMBLES
ASSISTANT ADMINISTRATOR FOR WATER
U.S. ENVIRONMENTAL PROTECTION AGENCY
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Madam Chair and Members of the Subcommittee, I am Benjamin H. Grumbles, Assistant Administrator for Water at the United States Environmental Protection Agency (EPA). Thank you for the opportunity to testify before you today on the nation's water infrastructure needs and the solutions the Environmental Protection Agency and its partners are pursuing.

Developing innovative, market-based, and sustainable solutions for water infrastructure financing and management is specifically identified by Administrator Steve Johnson as a top priority in his action plan for the Agency. I am proud of the work we are doing and the progress we are making in collaboration with our Regions, the States, Tribal communities and other partners.

Over the past 20 years, communities have spent more than $1 trillion (in 2001 dollars) on infrastructure, operations and maintenance for wastewater treatment and disposal and drinking water treatment and supply. But, it may not be enough to keep pace with America's aging infrastructure systems. Many municipal water distribution pipelines and sewer systems were constructed in the period following World War II with an expected design life of 20 – 50 years. Deteriorating pipelines can cause releases of water or wastewater that result in environmental contamination and a net loss of water with major economic consequences. In addition, numerous treatment facilities that process water and wastewater are in need of upgrading to meet capacity and water quality requirements associated with protection of public health and the environment. There is critical need for replacing, upgrading, and modernizing these infrastructure systems.

Infrastructure Needs

With the aging of the nation's infrastructure and the growing investment need, the wastewater industry faces a significant challenge to sustain and advance its achievements in protecting public health and the environment.

In October of 2002, EPA released the Clean Water and Drinking Water Gap Analysis Report. The report estimated that if capital investments remained at current levels, the potential gap in funding between 2000 and 2019 would be approximately $122 billion (in 2001 dollars) for wastewater infrastructure and $102 billion (in 2001 dollars) for drinking water infrastructure. If revenue grows at 3% per year, a projection that is consistent with long-term growth estimates of the economy, the gap is approximately $21 billion (in 2001 dollars) for wastewater infrastructure and $45 billion (in 2001 dollars) for drinking water infrastructure.

Similarly, EPA's 2000 Clean Watersheds Needs Survey (CWNS) Report to Congress, which was issued in 2003, identified a total capital investment need of $156.9 billion (in 2001 dollars). The CWNS Report estimate differs from the Gap Analysis in that it included only needs that could be justified by project-specific documentation, excluded operations and management (O&M) costs, and reflects project-specific planning horizons generally less than 20 years.

The general causes of the infrastructure funding "gap" are not difficult to identify. Much of the projected gap is the product of deferred maintenance, inadequate capital replacement, and a generally aging infrastructure. In addition, populations are increasing and shifting geographically, thus requiring investment in existing or new infrastructure. The Census Bureau projects the population to grow to 325 million by the year 2020 (an increase of more than 15% over the 2000 population). Lastly, unlike utilities subject to state regulation such as electric and natural gas service and privately owned water systems, many utilities in the US have not historically charged their users the full cost of service.

Federal Financing for Water Infrastructure

The creation of the Clean Water State Revolving Fund (CWSRF) was a major milestone on the path to financial sustainability for our wastewater infrastructure. With the help of federal

capitalization grants, the States provide low interest loans for water infrastructure projects through their individual CWSRFs. Since loan repayments allow the funds to "revolve" over the long-term, the CWSRFs will become self-sustaining. For nearly twenty years, the CWSRF program has played a significant role in helping to finance water infrastructure, a role that will continue over the long-term. Over this time period, EPA has provided more than $24 billion to help capitalize the state-run programs. In combination with state monies and recycled loan repayments, the CWSRFs have been able to "leverage" the Federal investment into $61 billion to fund worthy water infrastructure projects. 2006 marks an important milestone in the CWSRF: it is the first time that over $5 billion in assistance was provided in any one year.

February 4, 2007 marks the 20th anniversary of the passage of the Clean Water Act amendments that authorized the CWSRF program. The CWSRF has helped thousands of communities throughout the United States finance water infrastructure improvements. Working with our State partners, EPA continues to explore how we may further expand the benefits of the CWSRF to more communities and more people. By promoting investment in sustainable infrastructure and encouraging greater creativity in project planning and development, the CWSRF will remain an important financing tool for many years to come.

The CWSRF is evolving as it is revolving. In recent years, the CWSRF program has undertaken an ambitious effort to add environmental and public health related information to its strong financial record. In 2005, states began linking projects to a river, lake, or stream and to designated beneficial uses of that body of water such as fishing and swimming to demonstrate the potential environmental value of the CWSRFs. As of January 2007, states have provided water body information on $11.1 billion of their CWSRF loans. The information indicates these loans support the goals of the Clean Water Act with $7.4 billion used to fund projects in water bodies with a designated use of freshwater fishing and $7.8 billion for projects in water bodies with designated recreational uses.

EPA is committed to helping our partners sustain progress and increase opportunities for state revolving funds through financial stewardship, innovation, and collaboration. The CWSRF

program demonstrates the power of partnerships to leverage, innovate, and excel to meet wastewater infrastructure, watershed protection, and community health needs.

The CWSRF is now and will continue to be a critical tool for capital financing of our Nation's wastewater infrastructure. But, it is not the only tool. Other aggressive and innovative actions and technologies are crucial to solving the Nation's water infrastructure needs.

EPA's Approach to Sustaining Water Resources

The Agency has approached the challenge of keeping pace with infrastructure needs of the future by developing a comprehensive strategy built upon what we call the "Four Pillars of Sustainable Infrastructure" – better management, water efficiency, full cost pricing, and the watershed approach. It is an effort to help ensure that our nation's water infrastructure is sustained into the future by fundamentally changing the way the nation views and manages its water infrastructure. It is a collaborative effort involving drinking water and wastewater utility managers, professional and trade associations, local watershed protection organizations, and federal, state, and local officials.

Better Management

The Better Management "pillar" involves changing the paradigm for utility management from managing for compliance to managing for sustainability. We are concentrating our efforts on improved performance through state-of-the-art management approaches focused on the entire utility, working with smaller utilities to improve their capacity to comply with regulatory requirements, and providing utilities with information on cost-effective technologies.

On May 2, 2006, EPA signed a groundbreaking utility management partnership agreement with six leading water and wastewater utility organizations to ensure the long-term viability of our nation's water systems through effective utility management. Under this agreement, we are working with our partners to identify the key attributes of effectively managed utilities, developing a set of example performance measures for utilities to use to gauge their performance, and identifying resources to help utilities manage all of their operations more effectively.

This partnership is the first of its kind between EPA and these associations, and we believe it will provide utilities with a common management framework to help them ensure that their operations and infrastructure are sustainable in the future. We expect to finalize the utility attributes and sample measures in spring 2007, and then work in partnership with the Associations to encourage their wide-spread adoption, along with other sustainable management practices like environmental management systems and asset management across the water sector in the coming years.

Full Cost Pricing

In many cases, water and wastewater services in this country do not consistently recover the full cost of service, nor do they accurately reflect the true value of the service provided. In fact, the average American family spends more each year for soft drinks and other beverages than they do for water and wastewater services combined.

In November 2006, we convened a workshop for drinking water and wastewater utilities, public utility commissions, academia, and consulting to discuss issues associated with achieving full cost pricing. The overarching message from the meeting was that full cost pricing will only be possible and successful in an efficiently structured and managed water and wastewater sector. The sector's current structure, management, and operations have potentially significant inefficiencies, some of which will be addressed by activities under the other pillars.

In facing this long-term challenge, we view our role as informing and facilitating a broad national dialogue on how to achieve our national public health and environmental protection goals in the least costly and most socially acceptable manner. We are also developing tools and techniques to assist utilities interested in recognizing and recovering the long-term, full cost of providing service. Our goal under this "pillar" is to help utilities correct market signals that have been distorted by years of subsidies, and to help communities find appropriate options for cost allocation and rate design.

Water Efficiency

Improved water efficiency reduces the strain on aging water and wastewater systems, and can delay or even eliminate the need for costly new construction. It also diverts less water from rivers, bays, and estuaries which help keep the environment healthy. Improved water efficiency also translates into cost and energy savings by reducing the amount of energy used to treat, pump, and heat water. Washing machines certified by EPA's Energy Star program, for example, use 35 to 50 percent less water and 50 percent less energy per load. This lowers energy demand, which also helps prevent air pollution.

Under the Water Efficiency "pillar" we are working to foster a national ethic of water efficiency, so that water is valued as a limited resource that should be used wisely. In June 2006, EPA announced the development of a new water efficiency market enhancement program. This program, called WaterSense, is an innovative partnership to promote water efficient products and services and help American consumers make smart water choices that save money and maintain high environmental standards without compromising performance.

The Program features a label that will make it easy to find products and programs that save water while ensuring product quality and performance. In November 2006, we released criteria for programs that certify irrigation design and installation professionals. Looking ahead, WaterSense will focus on residential plumbing products and smart landscape irrigation products, such as soil moisture sensors and weather based controllers.

We are supporting the formation of a national organization to foster water efficiency called the Alliance for Water Efficiency which initially is creating an information clearinghouse and website, and monitoring national plumbing and appliance standards and codes. We look forward to working with this organization as it helps foster the universal understanding and acceptance of the need for efficient water use and in promoting effective water-efficient products, practices, standards and best practices.

Other important activities under this pillar include implementing a Water Efficiency Leader program to recognize organizations and individuals who are providing leadership and innovation,

promoting the adoption of guidelines for the construction of water-efficient new homes, and incorporating water efficiency elements into building rating system such as the U.S. Green Buildings Council Leadership in Energy and Environmental Design (LEED) Green Building Rating System. One of EPA's newest and most impressive facilities, the Region 8 Headquarters, will save water through the use of low-flow plumbing fixtures such as waterless urinals and dual-flush toilets. It also has a green roof.

Watershed Approach

The goal of this "pillar" is to integrate watershed-based approaches into decision making at the local level so that communities can make the most informed and cost-effective infrastructure decisions that also help to ensure the overall health of the watershed. In many cases, adoption of watershed-based approaches, such as source water protection, "green infrastructure", water quality trading, and watershed permitting, in conjunction with traditional "hard infrastructure" approaches can help reduce overall infrastructure costs.

EPA is actively seeking input from outside groups on ways to further promote watershed approaches. A workgroup made up of members from the National Advisory Council on Environmental Policy and Technology has been formed and will provide initial recommendations later this spring. In December, EPA convened a watershed forum with several leading utilities to help define how EPA can foster these integrated watershed efforts, and work toward breaking down barriers to advancing low impact development.

The Agency's approach to sustainable infrastructure does not rely solely on the four pillars strategy. We are actively pursuing innovations to address the challenge of reducing costs and increasing investments in water infrastructure. We are also investigating innovative, market-based financing to help communities ensure adequate funding for sustainable infrastructure.

In March, the Agency has planned an unprecedented National conference to address the challenge of integrating the many diverse tools and strategies to pay for sustainable water infrastructure. Scheduled for March 21-23, 2007 in Atlanta, Georgia, it will provide a forum to

exchange and examine ideas about how best to meet the challenges of paying for Sustainable Water Infrastructure.

The conference will provide an opportunity to hear from a variety of practitioners with experience in innovative sustainable infrastructure approaches. It is hoped that the ideas and concepts presented will spur conversation about approaches for supporting sustainable infrastructure efforts. In the weeks following the Conference, EPA will host a meeting for leaders from the cosponsor organizations to consider what was learned and how best to pursue new ideas and approaches into collaborative efforts to support sustainable water infrastructure.

The Agency's Office of Research and Development has also been planning a new research program to generate the science and engineering to improve and evaluate promising innovative technologies and techniques to reduce the cost and improve the effectiveness of operation, maintenance, and replacement of aging and failing drinking water and wastewater treatment and conveyance systems. The program was identified in the President's Fiscal Year 2007 Budget to receive $7 million per year.

The initial focus of the program will be on "underground" infrastructure and, as such, the initial plan primarily identifies research, demonstration and technology transfer activities addressing wastewater collection systems and drinking water distribution systems. The products from the program will be provided to drinking water and wastewater utilities to help them adopt and implement new and innovative technologies and methods for cost-effectively operating, managing, rehabilitating and extending the life of their systems.

Water Security

The security of our wastewater infrastructure continues to be an important priority for the Office of Water. While EPA has worked to ensure that drinking water systems fulfill their obligations under the Bioterrorism Act, the Agency has by no means ignored wastewater systems, which are not subject to specific provisions of the Bioterrorism Act requiring the completion of vulnerability assessments and emergency response plans. EPA, for example, has provided

guidance and training to these utilities on how to conduct vulnerability assessments, prepare emergency response plans, and address threats from terrorist attacks.

Conclusion

We view the CWSRF program as a true success story. With the support of the Federal Government, every State now has a robust financial program that it can use to address its specific water quality challenges, today and into the future. Taken together, all of these initiatives, innovative tools, and funding resources will help EPA and its partners continue to build on the gains in water quality that we have worked so hard for and enjoyed over the past 30 years.

As the Subcommittee continues to study water infrastructure needs, the Administration would like to encourage a constructive dialogue on the appropriate role of the federal government in addressing these needs. Thank you, Madam Chair, for giving me the opportunity to speak with you this morning.

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