STATEMENT OF
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BEFORE THE
FISHERIES, WILDLIFE AND WATER SUBCOMMITTEE
ENVIRONMENT AND PUBLIC WORKS COMMITTEE
UNITED STATES SENATE
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Good afternoon, Mr. Chairman and Members of the Committee. I am Benjamin Grumbles, Acting Assistant Administrator for Water at the United States Environmental Protection Agency (EPA). I welcome this opportunity to discuss the issue of lead in drinking water, the specific situation related to elevated lead levels in the District of Columbia's (D.C.'s) drinking water, and actions that EPA is taking at the national level to address the matter.

Lead as a Public Health Concern

EPA places a high priority on reducing exposure to lead. This contaminant has been found to have serious health effects, particularly for children. Health effects may include delays in normal physical and mental development in infants and young children; slight deficits in the attention span hearing, and learning abilities of children; and, high blood pressure in some adults (which may lead to kidney disease and increased chance of stroke). But pregnant women and children are our primary concern. The Centers for Disease Control and Prevention (CDC) has identified a blood lead level of 10 micrograms per deciliter as the level of concern for lead in children.

Lead exposure in young children has been dramatically reduced over the last two decades. According to a 2003 CDC report [Surveillance for Elevated Blood Lead

Levels Among Children – United States, 1997–2001. Centers for Disease Control and Prevention. *Surveillance Summaries*, September 12, 2003. MMWR 2003:52 (No. SS-10)], 88% of children between the ages of 1 to 5 were estimated to have blood lead levels that exceeded 10 ug/dl for the period between 1976-1980. By 1999-2000, this estimate had decreased to approximately 2%. This decrease is largely due to the 1973 EPA regulation to phase out lead in gasoline between 1973 and 1995, and to the reduction in the number of homes with lead-based paint from 64 million in 1990 to 38 million in 2000. Some decline was also a result of EPA regulations reducing lead levels in drinking water and banning lead from paint. Other reasons include bans on lead in food and beverage containers and reductions in lead in industrial emissions, consumer goods, hazardous waste, and other sources. There are several EPA programs that continue to be successful in reducing the public's exposure to lead in the environment.

The most common source of lead exposure for children today is lead in paint in older housing and the contaminated dust and soil it generates. [see Risk Analysis to Support Standards for Lead in Paint, Dust and Soil (EPA 747-R-97-006, June 1998] This is primarily from housing built in the 1950s and homes with pre-1978 paint. Several Federal programs and surveillance and prevention programs at the State and local level continue to work towards reducing exposure to lead. In addition, EPA works with Federal agencies – mainly the Departments of Housing and Urban Development, Health and Human Services, and Justice through the President's Task Force on Environmental Health Risks and Safety Risks to Children – on implementing a federal strategy to virtually eliminate childhood lead poisoning.

Lead in Drinking Water

Although the greatest risks are related to paint, lead in drinking water can also pose a risk to human health. As indicated in EPA's public education language for the Lead and Copper Rule, approximately 20% of a person's exposure to lead can come from drinking water. The level of exposure can be greater for children and infants, particularly when tap water is used to mix juices and formula. EPA has set a maximum contaminant level goal of zero for lead in drinking water and has taken several actions over the last 20 years to reduce lead in drinking water. The 1986 Amendments to the Safe Drinking Water Act (SDWA) effectively banned the new use of lead solder, and leaded pipes from public water supply systems and plumbing, and limited faucets and other brass plumbing components to no more than 8% lead. To address lead in schools, the Lead Contamination Control Act (LCCA) of 1988 recalled drinking water coolers with lead-lined water reservoir tanks, and banned new drinking water coolers with lead parts. The 1986 SDWA Amendments also directed EPA to revise its regulations for lead and copper in drinking water.

An interim standard for lead in drinking water of 50 micrograms per liter, or parts per billion (ppb), had been established in 1975. Sampling of customer taps was not required to demonstrate compliance with this standard. In 1988, the Agency proposed revisions to the standard and issued a final standard in 1991. The revised standard significantly changed the regulatory framework. Unlike most contaminants, lead is not generally introduced to drinking water supplies from the source water. The primary sources of lead in drinking water are from lead pipe, lead-based solder used to connect pipe in plumbing systems, and brass plumbing fixtures that contain lead. Setting a

standard for water leaving the treatment plant fails to capture the extent of lead leaching in the distribution system and household plumbing.

EPA requires public water suppliers to meet the regulations governing treated water quality distributed via the public water system. The regulations do not require homeowners to replace their plumbing systems if they contain lead. To reduce consumers' lead exposure from tap water, EPA used its available authorities to require public water suppliers to treat their water to make it as non-corrosive as possible to metals in their customers' plumbing systems. These treatment requirements were issued in EPA's Lead and Copper Rule (LCR) on June 7, 1991.

The rule requires systems to optimize corrosion control to prevent lead and copper from leaching into drinking water. Large systems serving more than 50,000 people were required to conduct studies of corrosion control and to install the State-approved optimal corrosion control treatment by January 1, 1997. Small and medium sized systems are required to optimize corrosion control when monitoring at the consumer taps shows action is necessary.

To assure corrosion control treatment technique requirements are effective in protecting public health, the rule also established an Action Level (AL) of 15 ppb for lead in drinking water. Systems are required to monitor a specific number of customer taps, according to the size of the system. If lead concentrations exceed 15 ppb in more than 10% of the taps sampled, the system must undertake a number of additional actions to control corrosion and to inform the public about steps they should take to protect their health. The rule was subsequently revised in 2000 to modify monitoring,

reporting and public education requirements, but the basic framework, including the action level, was not changed.

The LCR has four main functions: (1) require water suppliers to optimize their treatment system to control corrosion in customers' plumbing; (2) determine tap water levels of lead and copper for customers who have lead service lines or lead-based solder in their plumbing system; (3) rule out the source water as a source of significant lead levels; and, (4) if action levels are exceeded, require the suppliers to educate their customers about lead and suggest actions they can take to reduce their exposure to lead through public notices and public education programs. If a water system, after installing and optimizing corrosion control treatment, continues to fail to meet the lead action level, it must begin replacing the lead service lines under its ownership.

Although we are currently seeing problems in the District, the LCR has proven to be successful in reducing levels of lead in drinking water. Following issuance of the rule in 1991, EPA required medium and large systems to conduct initial rounds of monitoring by December 1992. The results from the first round of sampling for large systems (serving more than 50,000) conducted in 1991 showed that 130 of 660 exceeded the action level of 15 ppb. We recently reviewed Consumer Confidence Reports for 109 of the systems that were on the list and found that only nine were above the action level within the last few years (one of which was D.C.). Thus it would appear that the actions taken by systems to reduce corrosion through appropriate treatment have significantly reduced the public's exposure to lead in drinking water. However, even though we have had success in reducing exposure, we must remain

vigilant to ensure that treatment continues to control corrosion and that information on potential risks is communicated to the public.

The Current Situation in D.C.

In the District of Columbia, WASA failed to achieve the intended objectives of the the regulatory framework that EPA established. Within the last few years lead concentrations have increased significantly. Public education efforts were not effective in reaching the people who needed to know about the problem or in conveying the risks posed to some customers by elevated levels of lead in the water.

The provision of safe drinking water is not an easy task. Treatment processes must be balanced to address multiple risks. EPA has developed guidance to assist systems in achieving simultaneous compliance with different standards to balance treatment processes between the need to control corrosion within a system and also avoid harmful byproducts that can result from disinfection processes. As Regional Administrator Welsh will describe, EPA is working with WASA and the Washington Aqueduct, managed by the U.S. Army Corps of Engineers, which supplies water to WASA, to determine if changes in treatment processes to reduce disinfection byproducts resulted in elevated lead levels. The situation in D.C. appears to be unique. In surveying States and regions, we have not identified a systemic problem of increasing lead concentrations in tap monitoring conducted by public water systems. However, we will continue to investigate this matter in the weeks ahead.

Actions Undertaken by EPA Headquarters

This event is a reminder of what we take for granted – that we can turn on our faucets, whenever we want, to draw a glass of clean, safe water. I also see it as indicative of the challenges in managing the nation's water infrastructure. We face the possibility of interruptions in service quality and public health protection as a result of deterioration of aging infrastructure or outdated components, such as the lead service lines serving older homes in the District. This will require significant levels of coordination on the part of local, State and Federal governments, and an understanding of the true investment needs on the part of customers.

With respect to the situation here in D.C., I fully understand the concerns that Congressional Members and Committees and City Leaders have regarding timely and effective public notification. EPA is reviewing the actions taken by all parties to ensure that we use the lessons learned to prevent such an event from taking place in the future – here in D.C. and in other communities across the nation.

Staff from my program and EPA's Office of Research and Development are currently working closely with the Region to provide technical assistance and are participating on the Technical Expert Working Group (TEWG) evaluating potential technical solutions to elevated lead levels. I directed staff to convene a peer review panel that is conducting an independent review of the TEWG's Action Plan released on March 10 and which will also review subsequent reports. Staff are also participating in a review of WASA's public education material and are working with the Region on communication issues in the District.

As the head of the national water program, I have undertaken a number of actions to address the specific issue of lead in drinking water from a national perspective.

All of us want to ensure that the nation's school children are not exposed to elevated lead levels in their drinking water. While States and schools may have acted immediately to remove harmful lead lined coolers in accordance with the 1988 Lead Contamination Control Act, lead solder and plumbing fixtures can still contain low levels of lead. States and schools should continue to monitor their water outlets to ensure that children are protected using EPA's recommended protocol for testing water in schools for lead. On March 18 I sent letters to every State's Director of Health and Environmental Agencies seeking their help in understanding and facilitating State and local efforts to monitor for lead in school drinking water. We want to know if additional guidance might help States and local governments conduct more comprehensive monitoring in schools and day care facilities.

I am also working with our enforcement and regional drinking water program managers to embark on a thorough review of compliance with and implementation of the Lead and Copper Rule. Our initial focus is to ensure that EPA has complete and accurate information on the Lead and Copper Rule in its Safe Drinking Water Information System. States were required to report specific results of monitoring (i.e., 90th percentile lead levels) to EPA for systems serving populations greater than 3,300 people beginning in 2002. On March 25, I sent a memorandum to Regional Administrators asking them to work with the States to ensure that all available information is loaded into the data system by the end of June.

With more complete information, we will be able to work in consultation with enforcement and regional staff to assess national compliance and implementation. Our review will attempt to answer three questions:

1. Is this a national problem? Does a large percent of the population receive water that exceeds the lead action level? Do a large number of systems fail to meet the lead action level?
2. How well has the rule worked to reduce lead levels in systems over the past 12 years, particularly in systems that had demonstrated high lead levels in the initial rounds of sampling?
3. Is the rule being effectively implemented today, particularly with respect to monitoring and public education requirements?

We expect this analysis to continue throughout the year and will release interim reports as results become available. Part of the analysis will include a review of the existing requirements of the rule and associated guidance. To help the Agency obtain additional information from experts, we have scheduled workshops in May to discuss sampling protocols for the rule and utility experiences in managing simultaneous compliance with multiple drinking water rules. Workshops on additional subjects may be scheduled later in the year.

The compliance review, expert workshops and other efforts underway will help us to determine whether it is appropriate to develop additional training or guidance or make changes as part of our review of existing regulations. Our immediate goal is to ensure that systems and States have the information they need <u>today</u> to fully and effectively implement the rule and minimize risks to public health.

Mr. Chairman, this reminds us all of the importance of communication – especially with the public. To maintain public health and confidence, information communicated to the public must not only be accurate, but timely, relevant and understandable. While I believe that communication efforts on the part of the Region, the District's Department of Health and WASA have improved, there is still much to be done to ensure that the city's residents are aware of the steps they can take to protect their health. As you will hear from Mr. Welsh, the Region is completing a thorough review of WASA's and the Aqueduct's activities to determine if any violations of environmental law have occurred. EPA will take the appropriate steps to protect public health, both by enforcing existing regulations and by using its additional authorities to address imminent and substantial threats to public health, as appropriate.

We will work closely with the Region, our public service partners and concerned citizens to investigate the situation in D.C. and to review implementation of the rule nationwide. EPA wants to ensure that citizens across the country are confident in the safety of their drinking water.

Thank you for the opportunity to testify this afternoon. I am pleased to answer any questions you may have.

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