



Jerry N. Johnson, General Manager

The District of Columbia Water and Sewer Authority

Before the

House of Representatives Committee on Government Reform

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Good morning, Mr. Chairman, and other members of the Committee. I am Jerry N. Johnson, General Manager of the District of Columbia Water and Sewer Authority, and I am pleased to represent the Authority before the Committee this morning.

As you know, the District of Columbia and the District of Columbia Water and Sewer Authority have been the focus of a great deal of attention in recent weeks. We appreciate this new opportunity to appear before the Committee to discuss these issues, explain what has been happening, and to talk about what it is we are learning as we respond to your questions.

My testimony will be very brief, but I would like to provide an overview of the current status of our activities in addressing elevated levels of lead in some of the District's homes.

Recent Actions

The Authority continues to work with the EPA on our obligations under the Safe Drinking Water Act and Lead and Copper Rule, including the recent submission of an updated action plan. The Authority is continuing a water sample testing program at no cost to the individual customer, and we are distributing filters to targeted residences. We continue to support the DC Health Department's activities, including blood level testing and follow-up environmental assessments.

Specifically, we have contacted each of the households by mail that is believed to have a lead service line or that does not have a record of service line pipe material. Each household has been strongly encouraged to participate in the lead sampling program.

We delivered a water filter and replacement cartridges to every residence that is identified as having a lead service line pipe. In fact, out of an abundance of caution, any household that participates in the testing program, regardless of pipe material, is receiving a water filter and replacement cartridge if it tests over 15 ppb.

WASA is moving forward with its lead line replacement program. WASA has already replaced about 800 service lines in public space this year. For the current year (ending September 30, 2004) WASA will physically replace over 1,600 lead service line pipes in public space. WASA's Board of Directors is considering a plan to increase the pace of the service line replacement – more than doubling the amount that will be replaced yearly, by proposing to totally eliminate lead service lines in public space by 2010.

WASA has engaged a team from the George Washington University School of Public Health, including individuals with experience in risk communications, epidemiology and pediatric health. The team is headed by Dr. Tee Guidotti, Professor and Chair of the Department of Environmental and Occupational

Health, School of Public Health and Health Services, Director of the Division of Occupational Medicine and Toxicology School of Medicine and Health Sciences, The George Washington University Medical Center and Co-Director of the Mid-Atlantic Center for Children's Health and the Environment, a pediatric environmental health specialty unit.

A WASA consultant is currently working to develop a technology that will permit WASA to more accurately identify/confirm service line pipe material without an excavation. This technology is now being field tested over the next 6-12 months. WASA is also investigating other approaches to help identify service line pipe material more efficiently.

The Lead Services Hotline responded to 54,331 customer calls and 6,538 emails since February 4, and we processed 23,168 test kit requests in response to these calls. We have conducted about 12,000 tests of residences.

With respect to properties that are larger than single-family sized homes, WASA's best information is that these larger properties are served by pipes that exceed two inches in diameter that are not usually made of lead. WASA proposed and EPA has approved a test plan to test our assumptions, and it is underway.

The Technical Expert Working Group and a group of Peer Reviewers have strongly recommended the addition of a corrosion inhibitor, zinc orthophosphate to the Washington Aqueduct's treatment process. EPA has approved this proposal and the Aqueduct will apply the zinc orthophosphate in drinking water in an area around Fort Reno, beginning June 1. Following an evaluation, system-wide application is planned for later in the summer. We believe that this process will coat the surfaces of pipe that come into contact with water in a manner that prevents lead leaching.

Strategies to Improve the Safety of Drinking Water

With respect to the need to review national standards and the Environmental Protection Agency's regulations, Mr. Chairman, one of the most important contributions I think the Authority can make to this discussion is to emphasize the enormous value of collecting and sharing accurate information.

Ensuring that the public has confidence in the water supply is of paramount concern. We share that concern and we are committed to achieving that goal.

The importance of informed judgment and considered action by public water systems, our regulators, and public health authorities is at the heart of building that confidence, and it cannot be over emphasized.

For example, WASA is funding a DC DOH outreach initiative to expand the scope and reach of lead blood level screening in the District. I have attached to

my testimony information from the District Department of Health, Blood Lead Level Screening Results from February 3 to May 6, 2004.

As of Friday, May 7, 2004, DOH had performed 5,293 blood lead level screens, including 1,924 from the DOH target population.

Of the 37 children under six with elevated blood lead levels, 13 lived in a home with a lead service line pipe and 24 did not. All children and nursing mothers with elevated blood lead levels lived in an environment where other significant sources of lead were present, such as lead dust and paint. In fact environmental assessments performed at 44 residences have shown lead dust and or soil levels that exceed EPA and HUD guidelines.

WASA's Experience

With respect to WASA's specific experience as a distributor of drinking water, we continue to learn.

WASA has undertaken two series of lead water sample tests in public schools. Each series of tests confirms that the distribution system has low to undetectable levels of lead, and that District schools compare favorably with respect to potential sources of lead water contamination to surrounding jurisdictions.

As recently as yesterday, a preliminary analysis by WASA of customer water samples drawn between April 2 and May 8 appears to indicate that chloramines, a disinfectant used in drinking water to guard against bacteria, viruses and other disease-causing agents, may have changed the water composition causing increased levels of lead in drinking water received by some District residents. We detected these surprising changes during a six week period in the spring of this year when the Washington Aqueduct switched from chloramines to free chlorine as a primary disinfectant in its routine annual treatment program.

This possibility was the subject of much speculation, as was the idea that drought conditions may have been a contributing factor, at one point.

But with real world data, we may have identified the primary factor responsible for causing elevated levels of lead in the homes of persons who have lead service line pipes. It is early yet, but our analysis of this data indicates that the change to chloramines for disinfection of the water supply may have caused the water to become more corrosive thereby causing service line pipes to leach lead.

We have shared this data with the Washington Aqueduct, the EPA, and our partners in Virginia who are also Washington Aqueduct partners, and we are strongly urging that they expedite a review of this data and what it means for the water treatment process and the District's water supply.

So with this learning curve still in mind, Mr. Chairman, we strongly encourage interested members of Congress and the EPA to evaluate the Lead and Copper Rule with a careful eye to its intent and a clear vision of what is achievable by the nation's public water systems.

H.R. 4268 provides one opportunity to help focus such a discussion that should involve a very broad range of stakeholders.

I will offer a few further observations:

- Managing water chemistry is a complex challenge, with a variety of effects that must be anticipated at the treatment plant, in the distribution system and in the homes of residents. Too narrow a focus by regulators on limiting a single potential contaminant can have unpredictable spillover and even unintended effects;
- Similarly, too narrow a focus on lead may potentially thwart an opportunity to better understand and respond to other challenges, such as disinfectant by products;
- An appropriate balance among corrosion control and service line replacements is very important, and should be guided by a clear assessment of the optimal approach for assessing actual risks and addressing the problem;
- It is important for policymakers, because it is important to taxpayers and ratepayers to weigh the costs of their decision, both with respect to absolute dollars and questions of equity
 - Almost every household pays a water bill, Mr. Chairman, so it's important to make sure that their investment in safe drinking water pays off for them
 - Since almost every household pays a water bill, regardless of income, a decision to use public resources to fund infrastructure improvements like changing service lines on private property should be carefully considered.

The Washington Aqueduct and WASA

With respect to our relationship with the Washington Aqueduct, it has proven a strong partner in the effort to ensure that residents have access to clean and safe drinking water. It is a relationship that has proven satisfactory for WASA's customers.

It has, however, proven sometimes awkward with respect to our relationship with the Environmental Protection Agency and other federal agencies. Your office and Congresswoman Norton have both interceded with OMB to help address an

OMB requirement that WASA provide the entire cost of capital projects up front at the Aqueduct, regardless of the rate of expenditures.

EPA, for example, recently relented, and modified its draft Washington Aqueduct permit for discharges into the Potomac. If WASA had not been removed as a permit holder, we would have been liable for any permit excursions, even though we do not own or operate the Aqueduct.

The question of operational responsibility and ownership was explored just a few years ago, and perhaps the time has arrived for us to take a second look at this issue.

There is something to be said for a single entity controlling both production and distribution in this environment, especially since customers and many others hold WASA, the distributor, accountable for all aspects of the provision of clean and safe drinking water.

In closing, Mr. Chairman, your invitation to testify today asked, “Who should be responsible for the District’s drinking water and enforcing compliance with the federal drinking standards?”

The Safe Drinking Water Act generally contemplates that government closest to the operators of public water systems are best equipped to administer, monitor and enforce the provisions of the law. We share that view, and I believe that the issue of primacy should be explored further.

I would be pleased to respond to any questions.



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

5000 OVERLOOK AVENUE, S.W. WASHINGTON, D.C. 20032

SUMMARY OF 2004 WATER TESTING DATA Samples Analyzed through May 19, 2004

Total Samples Conclusively Matched to Address in Database = 14290

Lead [ppb]	First Draw					
	Lead	Copper	Brass	Unknown	Other	
0-15	2277	4414	1204	2401	296	10592
>15-50	1804	389	60	806	29	3088
>50 - 100	280	58	10	99	2	449
>100-150	44	15	1	20	2	82
Over 150	46	17	3	12	1	79
	4451	4893	1278	3338	330	14290

Lead [ppb]	Second Draw					
	Lead	Copper	Brass	Unknown	Other	
0-15	2374	4501	1223	2470	287	10855
>15-50	1268	249	41	559	25	2142
>50 - 100	558	97	8	217	12	892
>100-150	173	31	4	63	4	275
Over 150	78	15	2	29	2	126
	4451	4893	1278	3338	330	14290

- Lead values continue to be measurably lower overall than last year's results
- "Second draw" results are indicative of service line impact on water quality, while "First draw" results relate to faucet and nearby internal plumbing impact.
- Copper, Brass, Other results present clear evidence that those service line materials contribute much lower levels of lead, and that 90%+ of these samples are below action level. Additionally, "first draw" results in premises served by those copper, brass and other materials are below the "action level"
- "Unknown" material results indicate that a relatively small percentage of these services may be lead services.
- Individual premise data are shared with DC Department of Health for correlation with blood lead level data



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COMPARATIVE LEAD DATA Before and During Chlorine Conversion May 20, 2004

Customer Samples from March 1, 2004 to March 31, 2004												
Lead [ppb]	First Draw						Second Draw					
	Lead	Copper	Brass	Unknown	Other	Total	Lead	Copper	Brass	Unknown	Other	Total
0-15	809	1881	589	796	119	4194	824	1921	599	812	114	4270
>15-50	712	163	29	291	11	1206	513	106	20	203	9	851
>50 - 100	119	27	6	42	1	195	225	37	4	83	6	355
>100-150	24	9	0	7	1	41	85	13	2	30	2	132
Over 150	19	6	3	5	0	33	36	9	2	13	1	61
Total	1683	2086	627	1141	132	5669	1683	2086	627	1141	132	5669

Customer Samples from April 2, 2004 to May 8, 2004												
Lead [ppb]	First Draw						Second Draw					
	Lead	Copper	Brass	Unknown	Other	Total	Lead	Copper	Brass	Unknown	Other	Total
0-15	592	880	237	676	61	2446	571	904	242	666	61	2444
>15-50	278	76	16	141	8	519	234	45	10	135	6	430
>50 - 100	49	14	1	14	0	78	92	20	2	31	3	148
>100-150	7	4	0	9	1	21	22	8	0	6	1	37
Over 150	8	7	0	5	1	21	15	4	0	7	0	26
Total	934	981	254	845	71	3085	934	981	254	845	71	3085

Customer Samples from April 20, 2004 to May 8, 2004												
Lead [ppb]	First Draw						Second Draw					
	Lead	Copper	Brass	Unknown	Other	Total	Lead	Copper	Brass	Unknown	Other	Total
0-15	353	260	61	433	20	1127	307	262	65	418	20	1072
>15-50	102	18	5	62	1	188	128	13	1	73	2	217
>50 - 100	14	4	0	5	0	23	32	4	0	9	0	45
>100-150	5	0	0	4	1	10	4	2	0	1	0	7
Over 150	4	1	0	0	0	5	7	2	0	3	0	12

Total	478	283	66	504	22	1353	478	283	66	504	22	1353
Comparison Data - Full Six Week Period												
	Lead						Unknown					
	Actual				Predicted		Actual				Predicted	
Lead [ppb]	1st Draw	%	2nd Draw	%	1st Draw	2nd Draw	1st Draw	%	2nd Draw	%	1st Draw	2nd Draw
0-15	592	132%	571	125%	449	457	676	115%	666	111%	590	601
>15-50	278	70%	234	82%	395	285	141	65%	135	90%	216	150
>50 - 100	49	74%	92	74%	66	125	14	45%	31	50%	31	61
>100-150	7	53%	22	47%	13	47	9	174%	6	27%	5	22
Over 150	8	76%	15	75%	11	20	5	135%	7	73%	4	10
Total	934		934		934	934	845		845		845	845

Comparison Data - Final Three Week Period												
	Lead						Unknown					
	Actual				Predicted		Actual				Predicted	
Lead [ppb]	1st Draw	%	2nd Draw	%	1st Draw	2nd Draw	1st Draw	%	2nd Draw	%	1st Draw	2nd Draw
0-15	353	154%	307	131%	230	234	433	123%	418	117%	352	359
>15-50	102	50%	128	88%	202	146	62	48%	73	81%	129	90
>50 - 100	14	41%	32	50%	34	64	5	27%	9	25%	19	37
>100-150	5	73%	4	17%	7	24	4	129%	1	8%	3	13
Over 150	4	74%	7	68%	5	10	0	0%	3	52%	2	6
Total	478		478		478	478	504		504		504	504

- “Predicted” results assume that distribution of results by lead concentration would be exactly the same for each service line material before and after transition to chlorine.
- Lead values noticeably lower for both lead and unknown service materials
- Results of final three weeks (still coming in) trend noticeably lower than first three weeks.
- Reductions are similar for both first draw and second draw samples.