

DOCUMENT CONTROL

Date	who	Version	Description	Comment
11/25/16	MF		Updated testimony sent to SB and CA	
11/27/16	gca	1.02	Updated and drafted testimony for asset management Tracked changes and formatted GCA provided text to be red	
11/27/2016	Mf	1.03	Minor revisions/accept CA comments	
11/28/16	srb	1.04	Minor edits	
11/29/16	gca	1.05	Name change and minor edits and updated recommendations	
11/29/16	srb	1.06	Collaboration and summation paragraphs	
11/29/2016	MF	Final	Final Version	



AWWA New Jersey

American Water Works Association

Re: Public Hearing for the Joint Legislative Task Force on Drinking Water Infrastructure

Date: Wednesday, November 30th, 2016 10:00am

Location: Trenton, NJ – Committee Room 11 of the State House Annex

Testimony by: Michael J Furrey, Stephen Blankenship and G. Christian Andreasen on behalf of the New Jersey Section American Water Works Association

Good afternoon, I would like to thank the Joint Legislative Task Force for the opportunity to present testimony today on drinking water infrastructure and water quality issues facing New Jersey water suppliers. My name is Michael Furrey and I am the Owner of Agra Environmental and Laboratory Services which provides certified water and wastewater and testing and compliance/operational services in NJ. I currently serve as the Chair of the New Jersey Section of the American Water Works Association (“Section”). I am here today with Stephen Blankenship, Executive Director of the Hamilton Township MUA (Atlantic County) and Director for the Section, and G. Christian Andreasen, Director of Engineering for Middlesex Water Company and Chair of the Section’s Infrastructure Management Committee (IMC).

The American Water Works Association - New Jersey Section (AWWA NJ) is an association consisting of more than 1,200 NJ based operators, engineers, academics, and other allied water and wastewater professionals. We are the leading authority in drinking water issues throughout the State of New Jersey. On July 1, 2016 the Joint Legislative Task Force on Drinking Water Infrastructure was formed from Bill ACR161. The Section’s Infrastructure Management Committee is specifically charged with assisting in the development and implementation of asset management plans. Considering the Section’s large and diversified water professional membership base, the Section believes it can provide the Task Force with a valuable perspective and would welcome the opportunity to become an active participant in your deliberations.

Some of the most significant advances in public health protection have been developed by AWWA members, including chlorination and filtration of drinking water right here in the State of New Jersey. Recent events in Flint, Michigan and the Newark (NJ) school system have heightened awareness of the value of drinking water professionals and regulatory agencies in the protection of public health, especially with the dangers of lead in drinking water. These events and others around the State have reinforced a continued need for diligence, proper regulatory oversight, and transparency in the public water supply field. In spite of these events, the vast majority of public water suppliers are providing high quality drinking water to their customers and are complying with monitoring and treatment requirements for currently regulated contaminants, and are routinely reporting this information to the public. The Flint Michigan final task force report issued in March 2016 concluded that there were serious failures at all levels of government that can never happen again. While Flint was not initially an infrastructure

failure, it triggered greater concern by the public and by elected officials on the state of the nation's water infrastructure. It is important to note New Jersey also has aging infrastructure that needs to be addressed. As we address this need, we must make every effort to NOT repeat any of the missteps made by Flint Michigan, which jeopardized public health and eroded the public's confidence in our water supply infrastructure.

As background, water infrastructure was generally installed as part of new construction for real estate development of neighborhoods, towns and cities throughout the State. Typically these assets were installed as part of the overall construction of the area's infrastructure; buried facilities were installed first, with road systems and above ground assets constructed afterwards and on top of the buried infrastructure. This resulted in a cost effective bottom up initial construction of all infrastructure, and these costs were typically included in the development costs for the project, as a part of the overall real estate cost for the homes or commercial buildings that were eventually purchased and occupied.

Investment in the water infrastructure has been a challenge and something that has not been a priority in prior years, mostly due to the lack of full understanding of the age and condition of the assets, the "out of sight" scenario of these assets, the excellent reliable service provided by the State's water utilities, and the reluctance to raise rates for utility service. As described previously, New Jersey residents are fortunate that the level of service provided allows consumers to be able to get safe adequate and proper water service from their tap 24 hours a day, 365 days per year, with minimal outages. This service is provided at a very low cost especially when compared to bottled water, or monthly costs for cell phone, internet service, cable TV, or other services. Yet the public's willingness to pay higher utility bills for long term sustainability of the infrastructure continues to be an issue that needs to be addressed.

There is broad recognition of the need for consistent reinvestment in New Jersey's aging water system infrastructure both to ensure that it will continue to serve the needs of our State and reduce the risk to the environment, economy, and public health. As the State focuses on redevelopment and quality of life, the provision of water service, protection of health, and minimization of water service disruption is essential.

While this aging water infrastructure condition has many similarities to the needs of roads, bridges and other public infrastructure, these "buried water assets" have the added criteria of being out of sight, and mostly out of mind. This is of course until a failure occurs and causes damage, disruption to service, and inconvenience. The location of the water assets being buried and shared in rights of ways with roads, other utilities, and public access has added to the challenges of operating and managing these systems. These challenges include the ability to inspect and access an asset for proper condition assessment, sharing of the right of way with other utilities and road facilities, and the public's expectations for the road and their public access to be free and clear, usually considered the most important use of this right of way area. This ends up resulting in road restoration and traffic maintenance being a major part of the work and increases the costs of water and wastewater infrastructure repair and replacement.

Much of the water infrastructure, particularly in the state's urban areas, is approaching 100 years old. Many of these older transmission and distribution systems have significant leakage, also

known as non-revenue water, which becomes a much greater issue as we enter drought conditions. The aging facilities require review and repair so that we can make the most efficient use of our water supply system. Unfortunately, these older urban areas are also where the greatest concentration of low income households resides.

To help address these challenges, the Section supports the use of Asset Management principals and Asset Management Planning for infrastructure operations, maintenance and reinvestment. Asset Management, and Asset Management Programs/Planning (AMP), is the discipline to proactively and effectively address the needs of aging infrastructure, prioritizing limited resources and assuring that there is a deliberative and efficient approach to addressing the most important needs first, achieving the desired level of service for the utility in the most cost effective manner. Simply stated, **Asset Management is a program to provide agreed level of service in the most cost effective manner for present and future customers.**

Forms of asset management have been practiced informally and formally by many utilities for many years. These include standard operations and maintenance (O&M) and capital improvement plans (CIPs) for the utility. Recently there has been more awareness and focus on the use of formal Asset Management Plans, what those plans entail, and how they can be used effectively across the water and wastewater industry to address the needs of aging infrastructure, and the financial requirements that will be necessary.

Formal Asset Management Plans are comprehensive programs which involve the following:

1. Performing an inventory and condition assessment of the system's assets;
2. Defining level of service goals;
3. Prioritizing assets based on criticality and business risk exposure;
4. Establishing life cycle costs
5. Developing a long-term funding strategy.

It is clear that in order to address this infrastructure need, it will require a significant amount of funding. A study by American Water Works Association (AWWA) determined that restoring existing water systems as they reach the end of their useful lives and expanding them to serve a growing population will cost at least \$1 trillion over the next 25 years if the current level of service is to be maintained. Funding sources and acceptable strategies remain a significant obstacle to address this need. Costs for an effective operation of a water system include operating, maintenance and infrastructure reinvestment, which are typically recovered through a customer's water utility bill. In New Jersey, organization wise, there are three (3) general types of water utilities that are represented by the NJ Section AWWA, and each have their own process for setting water utility rates. They are:

- Public Utility Department as part of and governed by the local municipality government, where rates are typically set by the local municipal governing body.
- Public Utility Authority or Commission that is governed by a specific Authority or Commission governing board (that may be affiliated with a local municipal or regional government entity), where rates are typically set by this governing board.
- Investor Owned Water Utilities where rates regulated and approved by the New Jersey Board of Public Utilities.

The best practice for utility rate design is that the utility bill should reflect the full cost pricing representing the total and true cost for the utility, including operations, maintenance, and reinvestment of utility assets. Water rates should not subsidize, or be subsidized by, other programs or needs. This is not practiced in all situations throughout the State, particularly where water systems are public and part of an overall budget for a municipality as other non-utility needs and priorities may impact water system funding.

Several programs have been implemented and are in place that begins to address the need for adequate funding. These include the use of low cost borrowing through the State Revolving Fund (SRF) via the NJ Environmental Infrastructure Trust (NJEIT) and the Distribution System Improvement Charge (DSIC) available for the State's investor owned water utilities and adopted in 2012 by the NJ BPU. The SRF provides for low cost loans for approved water and wastewater infrastructure projects. The DSIC allows investor owned utilities to utilize a modest surcharge itemized on a customer's bill to recover expenditures on necessary rehabilitation and replacement of aging infrastructure. These two programs are a good start but need to be supplemented with additional programs to assure adequate funding of this need.

The Section supports a collaborative approach to asset management issues within the water utility industry. It has worked with and will continue to work with NJDEP and other organizations to develop asset management approaches that promote a deliberative and steady process to assist utilities in operating, maintaining, and renewing their assets in a cost effective manner. A methodical approach will allow utilities to pursue full cost pricing and funding and hopefully avoid large rate shocks along the way.

The water supply industry and the Section recognize that a major focus of this newly formed Task Force for the State of NJ is on lead in water issues as well as other potential water quality issues that can be caused by the water industries' aged and potentially failing infrastructure. The Lead and Copper Rule (LCR) was established in 1991 and the industry has come a long way in reducing exposure of lead in drinking water through various regulatory water quality compliance efforts. The Section is working closely with NJDEP on providing training for schools, water professionals and assistance with the review of the USEPA Federal Revised Lead and Copper Rule. The Section is also working closely with the NJDOE and NJDEP on regulations regarding lead in schools that will be required moving forward into 2017 and beyond. The Section also dedicated a lead information webpage, <http://njawwa.org/?page=LeadandCopper>, on the Section's website and recently formed a Lead and Copper Advisory Committee to focus on current regulations and any potential revisions to the USEPA/NJDEP Lead and Copper Rule. The Committee identified the following areas of focus:

1. Large private and public water systems have been spending a considerable amount of time on reviewing sampling protocols, plumbing surveys, and increasing water quality testing to optimize lead removal. In some cases, the systems voluntarily installed new corrosion control initiatives in advance to any potential revisions to the LCR.
2. Small to medium size water systems, having lead and copper corrosion issues that operate under the guidance of qualified NJDEP licensed operators who safely operate, test and address complex compliance issues. These systems do not always have the funding

necessary to comply with complicated regulatory requirements. The Section urges legislators to continue having the State of NJ offer financial assistance to distressed water systems.

3. There has been considerable effort with improving the transparent process of notifying consumers through various public education and notification processes. The Section encourages any new regulations to contain open and transparent communications on the risks of lead contamination in drinking water.
4. Through extensive training of school officials, health departments and public officials, the Section has made considerable efforts to assist schools, NJDOE and NJDEP with lead compliance issues.
5. The industry is particularly focused on full rather than partial lead service line replacement. The Section highly recommends full lead service line replacement via funding made available to the water systems and the final ultimate consumers of the water distribution system.
6. The Section wants to emphasize that there are many sources of lead (lead solder, brass fittings and certain types of valves) that make it extremely difficult to control in the final water supply. The industry is expending considerable efforts to optimize corrosion control and to demonstrate compliance through follow-up testing. The Task Force will have to study and consider the pros and cons of full scale plumbing replacement due to its extremely high remediation costs.
7. Most importantly the Section strongly emphasizes that there is **NO SAFE LEVEL OF LEAD**. The industry wishes to continue to work with legislators and environmental regulators to determine pragmatic and sensible Lead and Copper regulations that protect public health at a reasonable and realistic cost.

In summation, the Section strongly encourages our legislative and its leaders to support the following:

- A collaborate approach and process between NJDEP and water utility industry to address water quality issues and the rehabilitation and renewal of utility systems through asset management planning and processes.
- Full cost pricing and funding.
- Avoid overreactions and “shoot from the hip” solutions to address the crisis of the day.
- Funding and resources for the New Jersey State Departments of Environmental Protection to ensure that it will be properly staffed and supported to meet the challenges at hand.

The New Jersey Section of AWWA appreciates the opportunity to present our testimony today and it is hoped that our offer of assistance, request for resources and a collaborative approach is seriously considered by this Committee and the State.

Respectfully Submitted,

Michael Furrey, AWWA-NJ Chair

Stephen Blankenship, PE, AWWA-NJ Director

G. Christian Andreasen, PE, AWWA-NJ Infrastructure Management Committee Chair