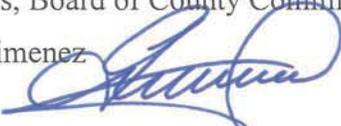


June 21, 2016
Agenda Item No. 2B3

Date: April 6, 2016

To: Honorable Chairman Jean Monestime
and Members, Board of County Commissioners

From: Carlos A. Gimenez
Mayor 

Subject: Report on Effective Management of Lead in the County's Drinking Water -
Directive 160449

During the January 20, 2016 Board of County Commissioners meeting, Commissioner Dennis C. Moss requested that the Miami-Dade Water and Sewer Department (WASD) prepare a report on the efforts made by WASD to protect the County's water system from lead contamination, assuring residents that the Flint, Michigan, incident would not occur in Miami-Dade County.

Lead Contamination in the Drinking Water Supply in Flint

The importance of effective water supply management has been publicized on a national scale as a result of recent events in Flint, where the improperly managed public drinking water supply resulted in many cases of elevated blood lead levels. As indicated in the news reports regarding Flint, the presence of lead in the water supply was primarily the result of a distribution system with lead service lines from the water mains in the street to individual homes in the community. When the decision was made to shift the water supply from the metropolitan Detroit water system to the Flint River, a treatment decision was also made not to add polyphosphate, the chemical used by most water utilities to create a thin coat on the inside of the distribution pipes to limit the leaching of lead into the water from lead pipes and faucets made of brass and bronze that have lead content, to the water. The Flint River water, in the absence of corrosion control, dissolved the coating previously in place and began leaching lead into the water consumed by customers.

United States Environmental Protection Agency – Water Sampling Requirements

Human exposure to lead has long been a significant public health concern. The United States Environmental Protection Agency (USEPA) began regulating the lead content of plumbing materials in 1986 and implemented the Lead and Copper Rule in 1991, requiring periodic sampling of lead and copper levels in drinking water at the point of consumption.

Large water systems, like the County's system, are required to sample at least 100 homes during two (2) consecutive six-month periods. The sampling frequency is reduced to every three (3) years with a minimum of 50 sampling locations if the results do not exceed compliance levels. Compliance is achieved if there are no exceedances of the lead or copper standards in 90 percent of samples taken.

The County's Water Distribution System

WASD has been in full compliance with the Lead and Copper Rule since its implementation in 1991. In contrast to many northern water systems, the County's water distribution system has very few lead components. Whenever lead components are found in the routine maintenance of the distribution system, they are removed and replaced with a component that does not contain

lead. Unlike Flint, the County's ground water source is not as corrosive as the typical surface water sources used by Flint and other areas. The natural alkalinity and hardness of the County's water help coat the distribution system, as do the addition of polyphosphate chemicals, which are safe and effective in further enhancing corrosion control efforts. These factors serve to substantially reduce the risk of lead from leaching into water through household piping and plumbing before it is consumed, as evidenced by the County's sampling results over the past 25 years, which have consistently met USEPA'S lead standard.

Another troubling factor in the Flint case appears to be a very inadequate response to consumer complaints regarding the quality of water after the change to the Flint River. WASD's procedures dictate same-day deployment of laboratory staff to sample and analyze water at a customer's residence to verify that the water quality meets all standards upon receipt of taste, odor, or color complaints.

Customarily, WASD staff receives 80 to 90 inquiries per month from a base of more than 430,000 retail accounts. WASD conducts more than 150,000 water quality analyses each year, including water from the supply wells, water from the different stages of the treatment process, and water from the distribution system and customer homes. WASD works closely with the Florida Department of Health and all pertinent regulatory agencies to make sure that public notices are issued when warranted and that any conditions, such as water main breaks or equipment malfunctions, are fully analyzed and considered in terms of any public health implications.

Conclusion

It is apparent that the Flint utility and City of Flint management failed to perform its responsibilities to deliver a clean and safe water supply. The reported motivation behind switching water sources and then failing to provide the corrosion control treatment in a system known to have a large number of lead service lines was due to financial reasons. This incident underscores why something as critical as the public water supply should not be compromised solely based on financial impact.

Utility management can and should be efficient, but first and foremost it must be effective. The first line of defense is having a professional, competent, and committed utility staff who will always advocate for the health and safety of its customers. The second line of defense is an effective and attentive regulatory system to advise policy officials and the public of compliance issues in a timely manner.

Fortunately, the Board of County Commissioners and my administration continue to support our water and wastewater improvements to ensure a clean and safe water supply. The investment we are making in our water and wastewater infrastructure will yield high returns for our current and future residents. Simply put, the investment in our water supply is the right thing to do and incidents such as the one in Flint, will serve as a reminder of the importance of making decisions based on the overall impact and not based solely on short-term cost.

Per Ordinance 14-65, this memorandum will be placed on the next available Board of County Commissioners meeting agenda.

Should you have any questions or require further information, please contact Miami-Dade Water and Sewer Director Lester Sola at 786-552-8200.

c: Abigail Price-Williams, County Attorney
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