



MIAMI BEACH

029-2016

LETTER TO COMMISSION

To: Mayor Philip Levine and Members of the City Commission

From: Jimmy L. Morales, City Manager

Date: January 22, 2016

Subject: **Drinking Water Quality**

The purpose of this Letter to Commission is to provide an update on the City's efforts to ensure the residents and visitors receive the highest quality drinking water possible.

The City of Miami Beach purchases its drinking water from the Miami-Dade Water & Sewer Department (WASD) as a wholesale customer and then supplies it to its residents and visitors through the distribution system. WASD manages the water chemistry and tests for biological, organic, and inorganic contaminants. Biological examination and chemistry testing is continuously ongoing. Organic and inorganic testing is performed annually and the results are provided to the City for review. All testing shows the water being received from WASD meets or exceeds federal and state drinking water standards.

The City of Miami Beach employs professionally licensed water treatment operators, distribution system operators, and engineers. Collaboratively this team has developed a proactive water quality sampling and monitoring plan and best management practices exceeding federal and state minimum requirements. The highlights of the plan include daily, monthly, yearly, and three-year interval testing and operating protocols to protect the consumers.

Daily (holidays and weekends excluded) testing includes disinfectant residuals and pH at our water storage facilities and each WASD water entry point into our system. These two water chemistry tests are the most likely indicators of any acute biological or chemical contamination. Biological contamination of the water would exert a demand on the disinfectant and the residuals would change dramatically. Many chemical toxins, if introduced into our water supply, would alter the pH of the water. If unexplained changes in disinfectant levels or pH were to occur, immediate notifications would occur to regulators and consumers of the conditions and the mandated precautionary measures would be implemented.

On a monthly basis, 268 disinfectant residual tests and 120 bacteriological examinations are performed of the water at strategic locations throughout the distribution system. The bacteriological examination consists of testing for indicator organisms. Indicator organisms are considered to be easier to detect and more difficult to eliminate with disinfection techniques than disease causing organisms.

Annually disinfection byproduct testing is performed. The primary purpose of these tests are to detect trihalomethanes (TTHM's) and haloacetic acids (HAA5s). TTHM's and HAA5s are considered to be potentially carcinogenic compounds by the Environmental Protection Agency (EPA) if consumed in high concentrations over a long period of time. TTHM's and HAA5s are formed when chlorine type disinfectants remain in contact with naturally occurring organics in water for an extended period of time. The EPA requires notification to consumers if testing ever exceeds the acceptable threshold for TTHMs and HAA5s. The tested levels of TTHMs and HAA5s are consistently far below the threshold set by the EPA.

On three-year intervals we test the distribution system for lead and copper. These tests are taken from inside customers' homes and businesses throughout the distribution system. Retrieving samples from the drinking water user's faucet or spigot provides an indication if the typical consumer is receiving elevated levels of lead or copper. Testing indicates lead and copper levels are far below acceptable limits.

The water chemistry is intentionally designed to be slightly "scale forming" to prevent contaminants such as lead and copper found in plumbing pipes and fixtures from leaching into the water.

The City's best management practices for the water distribution system includes techniques designed to prevent water contamination and preserving the aesthetic quality our customers have grown to expect and deserve. Some of those techniques are maintaining a minimum pressure to prevent back flows into the system, performing repairs under pressure or maintaining an outflow of water during repairs when repairs cannot be made under pressure, disinfecting new water piping and parts prior to installation, and regularly flushing portions of the system where water may become stagnant preventing the formation of TTHMs and HAA5s. Additionally, the Administration is pursuing an incentivization plan for City personnel to provide them opportunities and rewards for increasing their level of training, certification, and licensure in water distribution system operations.

If you have any questions or concerns about our water quality, please do not hesitate to contact me directly.

JLM/ETC  JLF/RWC