Providing safe drinking water to all customers is essential to Buffalo Water’s mission. As part of this effort, Buffalo Water has launched an industry-leading endeavor to optimize corrosion control that far exceeds federal regulatory requirements.

**Taking a Proactive Approach to Corrosion Control**

**Source Water and Treatment:** Buffalo Water utilizes a holistic source-to-tap approach that begins in Lake Erie. Water is withdrawn via an intake located in the Emerald Channel, an area known for its sparkling clarity. The stable high quality source water, coupled with a modern water treatment plant, assures exceptional water is delivered to the City.

**Corrosion Control:** While water leaving the treatment plant has non-detectable levels of lead, privately-owned lead service lines and household plumbing materials can release lead into drinking water. Buffalo Water has performed specialized corrosion control treatment since 1997 using a phosphate-based corrosion inhibitor. Since the initial Lead and Copper Rule monitoring in 1993, lead levels in Buffalo have remained below the United States Environmental Protection Agency (EPA) Action Level of 15 parts per billion (ppb) as a result of Buffalo Water’s corrosion control treatment strategy.

**Proactive Approach:** While EPA regulations only require optimization of corrosion control treatment if lead levels exceed the Action Level, Buffalo Water is taking proactive steps to further enhance corrosion control. In 2016, the City of Buffalo launched the **Water Quality Initiative** with an emphasis on maintaining effective corrosion control based on the latest scientific research and industry best practices.

### City of Buffalo Lead Levels

<table>
<thead>
<tr>
<th>Lead concentration (ppb)</th>
<th>EPA Action Level</th>
<th>Buffalo Voluntary Action Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15 ppb</td>
<td>5 ppb</td>
</tr>
<tr>
<td>5</td>
<td>Every 3 years</td>
<td>Annual</td>
</tr>
<tr>
<td>10</td>
<td>50</td>
<td>More than 200 in 2016</td>
</tr>
<tr>
<td>15</td>
<td>If lead levels exceed the Action Level</td>
<td>Proactive industry-leading approach</td>
</tr>
</tbody>
</table>

**Emerald Channel Water Intake**

**Corrosion study pipe cutaway photo**

**Protective Scale**

**Lead Pipe**

**Water Quality Initiative Timeline (other side)**
Water Quality Initiative
TIMELINE

2016

**JULY**– Mayor establishes City’s Voluntary Internal Action Level of 5 ppb (three times lower than the EPA Action Level) to further protect the public health of consumers in Buffalo.

**AUG**– Buffalo Water creates a Lead Working Group which holds biweekly meetings to strategize on minimizing lead exposure in the City.

**AUG**– Buffalo Water launches the Residential Pilot Program Testing, to provide consumers with free lead testing of household drinking water requested through the Mayor’s “311 Action Line”. Residents of households with lead levels exceeding 5 ppb are contacted by Buffalo Water to discuss options to reduce lead exposure in the home.

**SEPT**– As part of its distribution system asset management program, Buffalo Water works to identify the locations of lead service lines at households in the City and to replace lead service lines when encountered during distribution system maintenance.

2017

**MAR**– The University at Buffalo initiates a pilot study using a state-of-the-art pipe loop system to investigate addition of fluoride at the water treatment plant. Buffalo Water will utilize the pipe loop system to monitor corrosion in the distribution system and identify opportunities to optimize corrosion control treatment.

**JULY**– Buffalo Water retains Hazen and Sawyer to complete a Corrosion Control Treatment Optimization Study including a comprehensive water quality analysis. As part of the study, Buffalo Water launches a profile sampling campaign to evaluate corrosion of lead service lines in City households.

**AUG**– Buffalo Water initiates a Building Water Quality Study in all City-owned buildings to evaluate potential localized water quality issues in large building plumbing systems.

**NOV**– Federal regulations require Buffalo Water to monitor for lead and copper at 50 distribution sites every 3 years. Instead, Buffalo Water completes proactive Annual Enhanced Monitoring throughout the water distribution system with more than 200 tap samples collected in 2016.

**Future**

Buffalo Water will utilize the results of studies to evaluate treatment techniques to further optimize corrosion control and minimize lead exposure in drinking water.

**For More Information:**
Please contact the Buffalo Water laboratory at (716) 847-1065 ext. 133