The City of Tamarac is proud to provide our citizens with the cleanest, best-tasting water possible. The City routinely monitors for contaminants in the drinking water according to federal and state laws, rules and regulations. We test the water more than 6,200 times each month. We test for compounds that affect the aesthetics of the water – color, smell, taste and clarity – and compounds that cause adverse health effects. Except where indicated otherwise, this report is based on the results of monitoring for the period of January 1, 2019 to December 31, 2019. Data obtained before January 1, 2019 and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

In 2019, the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment (SWA) on the City of Tamarac’s system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of the City’s wells. They identified 11 potential contaminant sources threatening 12 wells with a low susceptibility level of concern. The assessment results are available on the Department of Environmental Protection Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

THE TREATMENT PROCESS: GETTING YOUR WATER

- The water starts with a safe, reliable source – the Biscayne Aquifer. Rain seeps through layers of sand, clay, and limestone that filters and purifies the water.
- The first step takes place in a huge mixing unit called a clarifier. Here, lime and coagulants are added to remove some hardness and make the water aesthetically pleasing.
- Filtration follows to remove any sediment in the water.
- Chlorine and ammonia are added as a disinfectant to prevent growth of bacteria.
- Finally, fluoride is added to promote dental health.
- When the process is completed, clean drinking water is delivered to our customers through an underground pipe system.

TERMS AND DEFINITIONS

The following definitions explain abbreviations and information found in the 2019 Water Quality Table:

**Action Level (AL):** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

**Locational Running Annual Average (LRAA):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

**Parts per billion (ppb) or Micrograms per liter (ug/l):** One part by weight of analyte to 1 billion parts by weight of the water sample.

**Parts per million (ppm) or Milligrams per liter (mg/l):** One part by weight of analyte to 1 million parts by weight of the water sample.

**Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible, using the best available treatment technology.

**Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum residual disinfectant level or MRDL:** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum residual disinfectant level goal or MRDLG:** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Not Detected (ND):** Indicates that the substance was not found by laboratory analysis.

**Picocurie per liter (pCi/L):** Measure of the radioactivity in water.
## 2019 WATER QUALITY TABLE

### RADIOACTIVE CONTAMINANTS

<table>
<thead>
<tr>
<th>Contaminant and Unit of Measurement</th>
<th>Dates of sampling (mo. /yr.)</th>
<th>MCL Violation Y/N</th>
<th>Level Detected</th>
<th>Range of Results</th>
<th>MCLG</th>
<th>MCL</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radium 228 (pCi/L)</td>
<td>9/17</td>
<td>N</td>
<td>0.952</td>
<td>N/A</td>
<td>0</td>
<td>5</td>
<td>Erosion of natural deposits</td>
</tr>
</tbody>
</table>

### INORGANIC CONTAMINANTS

<table>
<thead>
<tr>
<th>Contaminant and Unit of Measurement</th>
<th>Dates of sampling (mo. /yr.)</th>
<th>MCL Violation Y/N</th>
<th>Level Detected</th>
<th>Range of Results</th>
<th>MCLG</th>
<th>MCL</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium (ppm)</td>
<td>9/17</td>
<td>N</td>
<td>0.0051</td>
<td>N/A</td>
<td>2</td>
<td>2</td>
<td>Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits</td>
</tr>
<tr>
<td>Sodium (ppm)</td>
<td>9/17</td>
<td>N</td>
<td>54.1</td>
<td>N/A</td>
<td>N/A</td>
<td>160</td>
<td>Salt water intrusion, leaching from soil</td>
</tr>
<tr>
<td>Fluoride (ppm)</td>
<td>9/17</td>
<td>N</td>
<td>0.58</td>
<td>N/A</td>
<td>4</td>
<td>4.0</td>
<td>Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm</td>
</tr>
</tbody>
</table>

### STAGE 1 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

<table>
<thead>
<tr>
<th>Disinfectant or Contaminant and Unit of Measurement</th>
<th>Dates of sampling (mo. /yr.)</th>
<th>MCL or MRDL Violation Y/N</th>
<th>Level Detected</th>
<th>Range of Results</th>
<th>MCLG or MRDLG</th>
<th>MCL or MRDL</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloramines (ppm)</td>
<td>1/1/19 - 12/31/19</td>
<td>N</td>
<td>2.8</td>
<td>0.6 – 3.8</td>
<td>MRDLG = 4</td>
<td>4.0</td>
<td>Water additive used to control microbes</td>
</tr>
</tbody>
</table>

### STAGE 2 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

<table>
<thead>
<tr>
<th>Disinfectant or Contaminant and Unit of Measurement</th>
<th>Dates of sampling (mo. /yr.)</th>
<th>MCL or MRDL Violation Y/N</th>
<th>Level Detected (LRAA)</th>
<th>Range of Results</th>
<th>MCLG or MRDLG</th>
<th>MCL or MRDL</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haloacetic Acids (five) (HAA5) (ppb)</td>
<td>3/19, 6/19, 9/19, 12/19</td>
<td>N</td>
<td>41.6</td>
<td>15.4 – 47.7</td>
<td>N/A</td>
<td>MCL = 60</td>
<td>By-product of drinking water disinfection</td>
</tr>
<tr>
<td>TTHM [Total trihalomethanes] (ppb)</td>
<td>3/19, 6/19, 9/19, 12/19</td>
<td>N</td>
<td>59.3</td>
<td>42.8 – 71.8</td>
<td>N/A</td>
<td>MCL = 80</td>
<td>By-product of drinking water disinfection</td>
</tr>
</tbody>
</table>

### LEAD AND COPPER (TAP WATER)

<table>
<thead>
<tr>
<th>Contaminant and Unit of Measurement</th>
<th>Dates of sampling (mo. /yr.)</th>
<th>AL Violation Y/N</th>
<th>90th Percentile Result</th>
<th>No. of Sampling Sites Exceeding the AL</th>
<th>MCLG</th>
<th>AL (Action Level)</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (tap water) (ppm):</td>
<td>8/17</td>
<td>N</td>
<td>0.0277</td>
<td>All 33 samples below the action level for copper</td>
<td>1.3</td>
<td>1.3</td>
<td>Corrosion of household plumbing systems; erosion of natural deposits</td>
</tr>
<tr>
<td>Lead (tap water) (ppb)</td>
<td>8/17</td>
<td>N</td>
<td>3.0</td>
<td>1 sample of 33 above the action level for lead</td>
<td>0</td>
<td>15</td>
<td>Corrosion of household plumbing systems; erosion of natural deposits</td>
</tr>
</tbody>
</table>

*Lead and Copper sampling is being conducted again in 2020*
ABOUT LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Tamarac is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

The City of Tamarac has been monitoring for UC as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UC and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UC. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. If you would like more information on the EPA’s Unregulated Contaminants Monitoring Rule (UCMR), please call the Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

A Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

B Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

C Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

D Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

E Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s Safe Drinking Water Hotline at (800) 426-4791.

SPECIAL HEALTH CONCERNS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800) 426-4791.

<table>
<thead>
<tr>
<th>Contaminant and Unit of Measurement</th>
<th>Dates of sampling (mo/yr)</th>
<th>MCL Violation Y/N</th>
<th>Highest Result</th>
<th>Range of Results</th>
<th>MCLG</th>
<th>MCL</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromide (ppm)</td>
<td>6/19 &amp; 12/19</td>
<td>NA</td>
<td>0.164</td>
<td>0.142 - 0.164</td>
<td>N/A</td>
<td>N/A</td>
<td>Natural occurrence from soil leaching</td>
</tr>
<tr>
<td>Manganese (ppm)</td>
<td>6/19 &amp; 12/19</td>
<td>NA</td>
<td>0.029</td>
<td>ND - 0.029</td>
<td>N/A</td>
<td>N/A</td>
<td>Natural occurrence from soil leaching</td>
</tr>
<tr>
<td>Total organic carbon (ppm)</td>
<td>6/19 &amp; 12/19</td>
<td>NA</td>
<td>6.54</td>
<td>5.86 - 6.84</td>
<td>N/A</td>
<td>N/A</td>
<td>Naturally present in the environment</td>
</tr>
</tbody>
</table>
For more information or questions about this report, please contact the City of Tamarac Water Treatment Facility.

Gary Meyer
Senior Chemist, City of Tamarac
Water Treatment Facility (954) 597-3790

This report is also available on the City’s website at
for residents west of State Road 7/US 441 and
for residents east of NW 31st Avenue.

For Utilities Customer Billing Questions:
Customer Service (954) 597-3590

For Water Service Questions:
Public Services Department (954) 597-3750

Commission meetings are held the second (evening, 7 pm) and fourth (morning, 9:30 am) Wednesday of each month.
For more information go to www.Tamarac.org.