Memphis Water
Clean & Pure

This report is produced and provided as required by the Rules of the Tennessee Department of Environment and Conservation (TDEC), Division of Water Supply (1200-51-35) and the Environmental Protection Agency (EPA).

Memphis Light, Gas and Water Division

General Information

(901) 544-MLGW (6549)

Memphis Light, Gas and Water Division

220 South Main Street
Memphis, TN 38103-3917

Memphis Light, Gas and Water Division

Clean & Pure

Water Supply (1200-5-1-.35) and the Environmental Protection Agency (EPA).

Public meetings are also held periodically by the Shelby County Groundwater Control Board. For more information on the time and location of future meetings, please call Greg Parker, Supervisor, Water Quality Branch at the Shelby County Health Department at (901) 222-9599.

For more information about your drinking water, please contact MLGW’s Customer Care Center at (901) 544-MLGW (6549) during the business hours of 7 a.m. - 7 p.m., Monday through Friday.

Copies of this report

• To obtain a copy of this report online visit: www.mlgw.com
• You can e-mail your comments to us at: waterlab@mlgw.org

En español


Memphis Light, Gas and Water Division

General Information

(901) 544-MLGW (6549)
**2012 Water Quality Table**

(results surpass state and federal drinking water regulations)

### Results of inorganic and disinfection by-products analyses

<table>
<thead>
<tr>
<th>Component</th>
<th>Maximum amount detected</th>
<th>Maximum contaminant level (MCL)</th>
<th>Maximum contaminant level goal (MCLG)</th>
<th>Major sources in drinking water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>8.073 parts per million</td>
<td>2 parts per million</td>
<td>2 parts per million</td>
<td>Discharge from drilling wells, discharge from metal refining, erosion of natural deposits.</td>
</tr>
<tr>
<td>Flouride</td>
<td>0.25 parts per million</td>
<td>4 parts per million</td>
<td>4 parts per million</td>
<td>Natural deposits, water acidification, which can promote reactions between natural components.</td>
</tr>
<tr>
<td>Nitrate</td>
<td>0.48 parts per million</td>
<td>10 parts per million</td>
<td>10 parts per million</td>
<td>Erosion of natural deposits, leaching from soils, sewage, runoff from fertilizer use.</td>
</tr>
<tr>
<td>Chlorine</td>
<td>1.96 parts per million</td>
<td>MCL=4 parts per million</td>
<td>MCLG=4 parts per million</td>
<td>Water additive used in central systems.</td>
</tr>
<tr>
<td>Total Trihalomethanes</td>
<td>0.15 parts per million</td>
<td>65 parts per billion</td>
<td>Not applicable</td>
<td>By-products of chlorination used in the water treatment process.</td>
</tr>
<tr>
<td>HAAS Haloacetic Acids</td>
<td>3.39 parts per million</td>
<td>65 parts per billion</td>
<td>Not applicable</td>
<td>By-products of drinking water disinfection.</td>
</tr>
<tr>
<td>Alpha Emitters</td>
<td>0.5 parts per million</td>
<td>15 parts per million</td>
<td>6 parts per million</td>
<td>Erosion of natural deposits.</td>
</tr>
<tr>
<td>Combined Radium</td>
<td>0.4 parts per million</td>
<td>5 parts per million</td>
<td>6 parts per million</td>
<td>Erosion of natural deposits.</td>
</tr>
</tbody>
</table>

### Results of 2012 lead and copper sampling at residential water taps

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount detected</th>
<th>Maximum contaminant level (MCL)</th>
<th>Maximum contaminant level goal (MCLG)</th>
<th>Major sources in drinking water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>0.00 parts per million</td>
<td>0.05 parts per million</td>
<td>Zero parts per million</td>
<td>Corrosion of household plumbing systems, erosion of natural deposits.</td>
</tr>
<tr>
<td>Copper</td>
<td>0.00 parts per million</td>
<td>0.5 parts per million</td>
<td>1.5 parts per million</td>
<td>Corrosion of household plumbing systems, erosion of natural deposits.</td>
</tr>
</tbody>
</table>

### Additional water quality parameters of interest

This table shows average levels of water quality parameters which are often of interest to our customers. Listed below are averages from our source treatment plants for 2012. There are no health-based limits for these substances in drinking water.

<table>
<thead>
<tr>
<th>Component</th>
<th>Average amount detected</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>7.00</td>
</tr>
<tr>
<td>Alkalinity</td>
<td>65.1°</td>
</tr>
<tr>
<td>TDS</td>
<td>62.2°</td>
</tr>
<tr>
<td>Chlorides</td>
<td>41</td>
</tr>
<tr>
<td>Color (PCU)</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Hardness (ppm/gallon)</td>
<td>11</td>
</tr>
<tr>
<td>Iron (ppm)</td>
<td>0.00</td>
</tr>
<tr>
<td>pH (standard units)</td>
<td>7.0</td>
</tr>
<tr>
<td>Sodium (ppm)</td>
<td>17.7</td>
</tr>
<tr>
<td>Sulfate (ppm)</td>
<td>1.1</td>
</tr>
<tr>
<td>Temperature (°F)</td>
<td>71</td>
</tr>
<tr>
<td>Total Dissolved Solids (ppm)</td>
<td>71</td>
</tr>
</tbody>
</table>

### Fluoride

* Maximum Amount Detected refers to the highest monthly average at any one of MLGW’s 10 treatment plants during the 2012 year. The average daily level is 1.0 parts per million for all MLGW treatment plants. MLGW is required to add fluoride to the water supply according to mandates set by a City of Memphis Ordinance. The U.S. Department of Health and Human Services (DHHS) proposed through the Center for Disease Control and Prevention that the fluoride level recommended for drinking water be set at the lowest end of the optimal range 0.7 mg/l to 1.2 mg/l. The Rules of the Tennessee Department of Environment and Conservation make this same recommendation. MLGW accepted the recommendation and lowered the fluoride content in the finished water to 0.7 mg/l. This replaced the 1 mg/l dosage.**

** Total Trihalomethanes (disinfection by-products)**

As a result of a chemical reaction between chlorine and naturally occurring organic matter in water, certain by-products form during the process of disinfection.

*** In 2011 and 2012, MLGW analyzed water at the water treatment plants for alpha emitters and combined radium. The values shown in the table are the maximum amounts detected.

### Alpha Emitters and Combined Radium

As water travels over land or through the ground, it can dissolve naturally occurring radioactive minerals or radioactive contaminants from human activities such as oil and gas production, mining activities or nuclear facilities. Certain minerals or contaminants may emit a form of radiation known as alpha emitters, radium 226 and radium 228 (combined radium). ***

### Lead and Copper

Plumbing materials could contribute to lead and copper levels at the tap. There is no detectable lead in Memphis’ source water. Regarding copper, very low levels of this metal occur naturally. Standing water in pipes for six hours or more along with lead or lead component plumbing may yield low levels of lead at the tap. It is rare that the lead levels exceed the action level. Depending on the specific circumstances, copper levels at the tap may be high.

**In 2011 and 2012, MLGW analyzed water at the water treatment plants for alpha emitters and combined radium. The values shown in the table are the maximum amounts detected.**

**Terms Used in This Report**

To protect public health, state and federal agencies set maximum contaminant levels, maximum contaminant level goals or action levels for contaminants. These measures are defined as follows:

**Maximum contaminant level (MCL)**

The highest level of a contaminant allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

**Maximum contaminant level goal (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 goal (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.

**Maximum residual disinfectant level (MRDL)**

The level of a drinking water disinfectant below which no residual disinfectant is detected in water samples. Treatment techniques are required to reduce the level of a contaminant in drinking water.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home’s plumbing. If you are concerned about elevated lead levels in your home’s tap water, flush your tap for 30 seconds to two 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 at http://www.water.epa.gov/drink/info/lead/index.cfm.

The results reported here on lead and copper are from tests performed in 2012 at a targeted group of homes served by MLGW in areas of Memphis and Shelby County.

*** Five homes, most of which had some lead plumbing constituents, were tested. Out of that number, only one exceeded the lead action level and none exceeded the copper action level. The samples were collected after six to eight hours of no water usage. (The 99th percentile value for lead was 3.67 parts per billion and for copper was 0.40 parts per million.)

**Additional Water Quality Parameters of Interest**

- **Alpha Emitters**
  - Presence of coliform bacteria: 0.00 parts per million
  - Presence of coliform bacteria: 0.00 parts per million
  - Zero bacteria detected: Naturally present in the environment.

- **Nitrate**
  - 0.48 parts per million
  - 3.67 parts per million
  - Erosion of natural deposits.

- **Fluoride**
  - 0.48 parts per million
  - 3.67 parts per million
  - Erosion of natural deposits.

- **Lead and Copper**
  - Action Level: 1.3 parts per million
  - Corrosion of household plumbing systems; erosion of natural deposits.

- **Alpha Emitters**
  - Presence of coliform bacteria: 0.00 parts per million
  - Presence of coliform bacteria: 0.00 parts per million
  - Zero bacteria detected: Naturally present in the environment.

- **Alkalinity**
  - 65.1°
  - 62.2°
  - 60.0°

- **Chlorides**
  - 41
  - 41
  - 41

- **Color (PCU)**
  - <10
  - <10
  - <10

- **Hardness (ppm)***
  - 11
  - 11
  - 11

- **pH (standard units)**
  - 7.0
  - 7.0
  - 7.0

- **Sodium (ppm)**
  - 17.7
  - 17.7
  - 17.7

- **Sulfate (ppm)**
  - 1.1
  - 1.1
  - 1.1

- **Temperature (°F)**
  - 71
  - 71
  - 71

- **Total Dissolved Solids (ppm)**
  - 71
  - 71
  - 71