Lead Exposure From Water

Elevated levels of lead in drinking water can cause serious health problems, especially for pregnant women and young children. Lead in drinking water comes primarily from materials and components associated with service lines and home plumbing.

The City/County Utility Commission 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 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 and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or go online at www.epa.gov/safewater/lead.
Treated Water Quality

The following substances were detected in Winston-Salem/Forsyth County public water supply during the 2016 calendar year.

### Regulated at the Treatment Plant

<table>
<thead>
<tr>
<th>Substance</th>
<th>Highest Level Allowed</th>
<th>Ideal Goal (EPA’s MCLG)</th>
<th>Range of Detections</th>
<th>Average Level Detected</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic, ppb²</td>
<td>10.0</td>
<td>10.0</td>
<td>ND</td>
<td>ND</td>
<td></td>
</tr>
<tr>
<td>Barium, ppb</td>
<td>2000</td>
<td>2000</td>
<td>11.0 - 23.0</td>
<td>15.2</td>
<td>Nature: 4 - 7.5 mg/L.</td>
</tr>
<tr>
<td>Chromium, ppb³</td>
<td>100</td>
<td>100</td>
<td>1.0</td>
<td>&lt;1.0</td>
<td></td>
</tr>
<tr>
<td>Fluoride, ppb³</td>
<td>4.0</td>
<td>4.0</td>
<td>ND - 1.24</td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td>Nitrate, ppm</td>
<td>10.0</td>
<td>10.0</td>
<td>ND</td>
<td>ND</td>
<td></td>
</tr>
<tr>
<td>Orthophosphate, ppm</td>
<td>0.5 - 3.0</td>
<td>1.0</td>
<td>0.60 - 1.43</td>
<td>0.89</td>
<td>Soil erosion</td>
</tr>
<tr>
<td>Total Organic Carbon, ppm</td>
<td>Treatment Technique⁶</td>
<td>n/a</td>
<td>0.04 - 0.10</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Turbidity, NTU⁷</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### In the Distribution System

<table>
<thead>
<tr>
<th>Substance</th>
<th>Highest Level Allowed</th>
<th>Ideal Goal (EPA’s MCL)</th>
<th>Range of Detections</th>
<th>Average Level Detected</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Trihalomethanes, ppb</td>
<td>90 LRAR⁴</td>
<td>0.0</td>
<td>15.0 - 120.1</td>
<td>49.6</td>
<td>Byproducts of drinking water disinfection</td>
</tr>
<tr>
<td>Total Halocarbon Acids, ppb</td>
<td>60 LRRA⁴</td>
<td>0.0</td>
<td>15.9 - 46.3</td>
<td>30.0</td>
<td>Byproducts of drinking water disinfection</td>
</tr>
<tr>
<td>Asbestos, MFL⁵</td>
<td>7 MFL</td>
<td>0.0</td>
<td>n/a</td>
<td>0.39</td>
<td></td>
</tr>
<tr>
<td>Chlorine, ppm</td>
<td>4.0</td>
<td>4.0</td>
<td>&lt;0.10 - 1.75</td>
<td>0.99</td>
<td>Water treatment additive for disinfection</td>
</tr>
<tr>
<td>Orthophosphate, ppm</td>
<td>0.25 - 1.5</td>
<td>1.0</td>
<td>0.52 - 1.17</td>
<td>0.84</td>
<td>Water treatment additive to prevent pipe corrosion</td>
</tr>
<tr>
<td>Alpha Emitter T, pCi/L¹</td>
<td>15.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>Naturally present in the environment</td>
</tr>
<tr>
<td>Beta Emitter T, pCi/L</td>
<td>50.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>Naturally present in the environment</td>
</tr>
<tr>
<td>Total Collirns</td>
<td>Less than 5% positive</td>
<td></td>
<td>0.0 - 1.0%</td>
<td>0.14%</td>
<td>Naturally present in the environment</td>
</tr>
</tbody>
</table>

### Regulated at the Consumers Tap

<table>
<thead>
<tr>
<th>Substance</th>
<th>Highest Level Allowed</th>
<th>Ideal Goal (EPA’s MCL)</th>
<th>Number of Sites Sampled</th>
<th>Number of Sites Above the Action Level</th>
<th>90th Percentile Concentration, ppb</th>
<th>Source (both lead and copper)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead, ppb</td>
<td>15.0 (action level)²</td>
<td>0.0</td>
<td>51</td>
<td>0</td>
<td>&lt;0.015</td>
<td>Corrosion of household plumbing.</td>
</tr>
<tr>
<td>Copper, ppb</td>
<td>1300.0 (action level)</td>
<td>1300.0</td>
<td>51</td>
<td>0</td>
<td>&lt;50.0</td>
<td>Erosion of natural deposits.</td>
</tr>
</tbody>
</table>

### North Carolina Drinking Water Assessment

The North Carolina Department of Environmental Quality (DEQ), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for the City of Winston-Salem (PWSID 0234010) was determined by combining the contaminant rating (number and location of PCs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below:

<table>
<thead>
<tr>
<th>Source Name</th>
<th>Inherent Vulnerability Rating</th>
<th>Contaminant Rating</th>
<th>Susceptibility Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>YADKIN RIVER</td>
<td>Higher</td>
<td>Lower</td>
<td>Moderate</td>
</tr>
<tr>
<td>(PIOWONAN WTP)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YADKIN RIVER</td>
<td>Higher</td>
<td>Higher</td>
<td>Higher</td>
</tr>
<tr>
<td>(BOILS DAM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SALEM LAKE</td>
<td>Moderate</td>
<td>Higher</td>
<td>Higher</td>
</tr>
</tbody>
</table>

### Cryptosporidium sp.

- is a microscopic organism that, when ingested, can cause diarrhea, fever and other gastrointestinal symptoms. The organism occurs naturally in surface waters (lakes & streams) and comes from animal wastes. Cryptosporidium sp. is eliminated by an effective treatment combination of coagulation, sedimentation, filtration, and disinfection.

Both of the city’s water sources are currently being tested monthly for Cryptosporidium sp. and to date it has not been detected. Cryptosporidium sp. has never been detected in our treated drinking water.

Special Concerns: Some people may be more vulnerable to contaminants in drinking water than the general population. People whose immune systems have been compromised — such as those 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 for infections. People should seek advice about drinking water from their health care providers.

En Español: Si desea recibir una copia de este reporte en Español o si tiene preguntas con respecto a la calidad del agua que consumen, por favor comuniquese con el departamento de los servicios públicos durante las horas de trabajo, el teléfono es (336) 727-8000.