The City of Norfolk obtains its raw (untreated) water from eight reservoirs, two rivers and four deep wells. The map at right shows the location of each of your water sources. From these sources, raw water is pumped to one of the Department of Utilities’ two water treatment plants, where it is filtered and disinfected. Once tested to meet water quality standards, Norfolk drinking water is pumped on demand to your tap.

If you have any questions about this Water Quality Report, please contact the Water Quality Lab at 757-441-5678.

The City of Norfolk Department of Utilities is committed to providing residents and businesses throughout the City with top quality water service. Utilities’ employees are on call 24 hours a day, 365 days a year to ensure that you always have access to healthy Norfolk drinking water. The Water Quality Report is distributed annually to inform our customers that we are meeting all water quality guidelines set forth by the Environmental Protection Agency.

Once again in 2018, Norfolk tap water met all federal requirements.

City of Norfolk Department of Utilities
Contact Information:

Business/Customer Service Address
401 Monticello Ave.
Norfolk, VA 23510

Mailing Address:
P.O. Box 1080
Norfolk, VA 23501

Customer Service: 757-664-6700
Water & Sewer Emergencies: 757-823-1000
Water Quality Lab: 757-441-5678

www.norfolk.gov/utilities

Please share this information with people who drink this water, especially those who may not have received this notice directly. The Norfolk Department of Utilities is a proud partner of AskHRGreen.org, where you can learn all things good for you! Now you know. Celebrate tap water and all it provides us.
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 or through the land or ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material. It can also pick up substances resulting from the presence of animals or humans. Contaminants that may be present in source (raw) water include:

- Microbiological contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and marine farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities. In 2001 the Hampton Roads Planning District Commission conducted a study on all the raw water sources in the area, including Norfolk’s, to determine the susceptibility of reservoirs, rivers, and wells to contamination. Norfolk’s susceptibility has been rated high. Norfolk’s water treatment process ensures you receive high quality treated tap water that meets all Federal Safe Drinking Water Act requirements. For a copy of this study contact Norfolk’s Water Quality Lab at 757-441-5678.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The standards establish a balance between protecting public health and setting achievable goals. Drinking water, including bottled water, may reasonably be expected to contain at least small (trace) amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. 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.

The EPA’s CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from:

![Environmental Protection Agency’s Safe Drinking Water Hotline](image)

**Definitions**
- **AL (action level)**, the amount required to trigger treatment or other action
- **LIKELY SOURCE**, where it could come from
- **MCL (maximum contaminant level)**, the highest level allowed by regulation
- **MCLG (maximum contaminant level goal)**, the ideal goal
- **MRDL (maximum residual disinfectant level)**, the highest level of a disinfectant allowed in drinking water
- **MRDLG (maximum residual disinfectant level goal)**, the level of a drinking water disinfectant below which there is no known or expected risk to health
- **Norfolk's Average Level**, the average level of a detected compound or water quality parameter
- **REGULATED SUBSTANCES** are regulated by the EPA and are not permitted to be above the MCL
- **SMCL (Secondary Maximum Contaminant Level)** are secondary contaminants, which are detected by treatment purposes only
- **TT (treatment technique)**, a required process intended to reduce the level of a substance in drinking water
- **TURBIDITY** is a measure of the cloudiness of water, which is not necessarily harmful, but can interfere with the disinfection of drinking water
- **UNREGULATED MONITORED SUBSTANCES** are not regulated by the EPA, but they must be monitored as information about their presence in drinking water can be used to develop limits.

### Table Key

<table>
<thead>
<tr>
<th>ppm</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;20 ppm</td>
<td>One part per million (equivalent to 1 minute in 2 years)</td>
</tr>
<tr>
<td>&gt;0.01 ppm</td>
<td>One part per billion (equivalent to 1 year in 3,000 years)</td>
</tr>
<tr>
<td>ppb</td>
<td>Parts per billion (ppb) (equivalent to 1 minute in 2,000 years)</td>
</tr>
<tr>
<td>NTU</td>
<td>Nephelometric Turbidity Unit (measure of very small particulate matter in drinking water)</td>
</tr>
</tbody>
</table>

Norfolk’s Highest Level (NTUs) is a measure of the cloudiness of water, which is not necessarily harmful, but can interfere with the disinfection of drinking water. Norfolk’s untreated water can have a turbidity level between 1.3 and 2.4 NTU.

### Lead and Copper in Customers’ Homes (data from 2017 triennial sampling)

Norfolk has extremely low lead levels in its drinking water system. Because of this, the EPA has placed Norfolk on a reduced monitoring schedule. No lead was detected at the monitoring level during this monitoring period.

### Turbidity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Likely Source</th>
<th>Norfolk’s Average Level (NTUs)</th>
<th>Norfolk’s Result(s)</th>
<th>Norfolk Homes Exceeding Action Level</th>
<th>National Action Level</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Household plumbing connections</td>
<td>&gt;0.5</td>
<td>0</td>
<td>15</td>
<td>0</td>
<td>ppb</td>
</tr>
<tr>
<td>Copper</td>
<td>Household plumbing connections</td>
<td>0.08</td>
<td>0</td>
<td>1.3</td>
<td>1.3</td>
<td>NTU</td>
</tr>
</tbody>
</table>

1Lead and copper compliance is measured at the 90th percentile of all samples taken during the triennial sampling period.

### Additional Information

<table>
<thead>
<tr>
<th>Substance</th>
<th>Norfolk’s Range</th>
<th>Norfolk’s Average Level</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkalinity</td>
<td>17 – 37</td>
<td>27</td>
<td>ppm</td>
</tr>
<tr>
<td>Ammonia</td>
<td>&lt;0.2</td>
<td>0.1</td>
<td>ppm</td>
</tr>
<tr>
<td>Hardness</td>
<td>32 – 44</td>
<td>43</td>
<td>ppm</td>
</tr>
<tr>
<td>Sulfate</td>
<td>3 – 6</td>
<td>6</td>
<td>ppm</td>
</tr>
</tbody>
</table>

These waters are the ranges in between soft and slightly hard. This means there is enough hardness for soaps and detergents to work properly, yet not too much to interfere with most industrial applications. To find grains per gallon, divide ppm value by 17.

For more information on the UCMR program, visit EPA online at: [https://www.epa.gov/dwscdr/forthfour-unregulated-contaminant-monitoring-rule](https://www.epa.gov/dwscdr/forthfour-unregulated-contaminant-monitoring-rule)

For questions regarding this report contact Norfolk’s Water Quality Lab at 757-441-5678. For more information about decisions affecting your drinking water quality, you may attend Norfolk City Council meetings. For times and agendas, call the City Clerk’s office at 757-664-6233.