You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at (800) 426-4751.

Compromised immune systems may be more vulnerable

Our top priority is providing a safe, reliable and affordable supply of drinking water to our growing customer base, which includes both retail and wholesale customers.

This 2018 annual Water Quality Report provides a year-end summary of our drinking water, monitoring and testing data, along with details about where Fort Worth water comes from, the water treatment process, and how it is distributed to customers.

We are proud of the drinking water we provide, which is a result of the investment in advanced treatment processes at our water plants coupled with the knowledge and dedication of our water utility employees. The 2018 report once again shows full compliance with drinking water standards.

The vast majority of our employees (including myself) are also customers—meaning that we utilize the tap water daily for drinking, cooking, brushing teeth and washing clothes—just like you do. We have a personal stake in providing the best quality water at an affordable price.

We understand the trust the public places in us to provide safe drinking water, and therefore, would recommend reviewing this annual report. The requirements for providing you this information do not always make the information easy to read or understand, so please feel free to contact us at 817-392-4477 or wpe@FortWorthTexas.gov if you have questions.

With kind regards,

Chris Harder, Director
Fort Worth Water
Supplying water to the nation’s 15th largest city is no easy feat and the challenges going forward as Fort Worth continues to grow will become even greater as demand for water increases. Sure, we see water in many places, such as the lakes, rivers and streams that dot the Texas landscape and think our water supply is plentiful. That’s not the case. Water is a precious commodity and it takes so much more to get clean, quality water to your kitchen faucet than just pumping it from those sources.

Currently, Fort Worth’s water supply comes from Lake Worth, Lake Bridgeport, Eagle Mountain Lake, Benbrook Lake, Richland Chambers Reservoir, Cedar Creek Reservoir and the Clear Fork of the Trinity River. Fort Worth owns Lake Worth and Benbrook Lake is the responsibility of the U.S. Army Corps of Engineers. The Tarrant Regional Water District owns the four remaining lakes as well as the water rights to them.

Lakes around Fort Worth fill slower than lakes in East Texas. Locally, the average annual rainfall totals about 34 inches compared to 40 inches a year south of Dallas where Richland Chambers and Cedar Creek reservoirs are located.

Where does my water come from?

TRWD constructed Cedar Creek Lake in the 1960s, and in 1972, The Rolling Hills plant began treating drinking water. In 2018, the city bought 71,026,944,466 gallons of raw water from TRWD, of which 18,899,060,764 gallons came from these two reservoirs.

Fort Worth can treat 500 million gallons of drinking water a day. The utility provides water to more than 1.2 million people in Fort Worth and surrounding areas, which include 30 water wholesale customers, 23 wastewater wholesale customers and three reclaimed water wholesale customers.

TRWD monitors raw water

While Fort Worth, the USACE and TRWD own the lakes, the TRWD is in charge of monitoring the quality of the raw water in all of them. Every month, staff tests the water for Cryptosporidium, Giardia Lamblia and viruses. The source of these parasites and viruses is human and animal fecal waste found in the watersheds.

TRWD’s 2018 testing showed low levels of Cryptosporidium, Giardia Lamblia and viruses in some of the water supply. The disinfection process in water treatment removes viruses from the water. Cryptosporidium and Giardia Lamblia are removed through the disinfection and/or filtration process.
### Secondary Constituents

These items do not relate to public health but rather to the aesthetic effects. These items are important to industry.

<table>
<thead>
<tr>
<th>Compound</th>
<th>MRDL</th>
<th>MCLG</th>
<th>Your water</th>
<th>Range</th>
<th>Violation</th>
<th>Common Sources of Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicarbonate</td>
<td>ppm</td>
<td></td>
<td>108 to 144</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>ppm</td>
<td></td>
<td>42.0 to 52.1</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>ppm</td>
<td></td>
<td>11.8 to 40</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Conductivity (µmhos/cm)</td>
<td></td>
<td>units</td>
<td>302 to 471</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td>units</td>
<td>8.4 to 8.7</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
<td>ppm</td>
<td></td>
<td>3.20 to 8.64</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td>ppm</td>
<td></td>
<td>14.8 to 30.3</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>ppm</td>
<td></td>
<td>26.3 to 36.5</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Total Alkalinity as CaCO₃</td>
<td>ppm</td>
<td></td>
<td>98.2 to 136</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>ppm</td>
<td></td>
<td>156 to 251</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Total Hardness as CaCO₃</td>
<td>ppm</td>
<td></td>
<td>118 to 162</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Total Hardness in Grains</td>
<td></td>
<td></td>
<td>7 to 9</td>
<td></td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

### Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

<table>
<thead>
<tr>
<th>Compound</th>
<th>MRDL</th>
<th>MCLG</th>
<th>Your water</th>
<th>Range</th>
<th>Violation</th>
<th>Common Sources of Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloral Hydrate</td>
<td>ppb</td>
<td>Not regulated</td>
<td>N/A</td>
<td>0.34</td>
<td>0.12 to 0.34</td>
<td>By-product of drinking water disinfection</td>
</tr>
<tr>
<td>Bromeform</td>
<td>ppb</td>
<td>Not regulated</td>
<td>0</td>
<td>5.15</td>
<td>0 to 5.15</td>
<td></td>
</tr>
<tr>
<td>Bromochloromethane</td>
<td>ppb</td>
<td>Not regulated</td>
<td>0</td>
<td>7.08</td>
<td>1.99 to 7.08</td>
<td>By-products of drinking water disinfection; not regulated individually; included in Total Trihalomethanes</td>
</tr>
<tr>
<td>Chlorform</td>
<td>ppb</td>
<td>Not regulated</td>
<td>70</td>
<td>8.40</td>
<td>2.43 to 8.40</td>
<td></td>
</tr>
<tr>
<td>Dibromochloromethane</td>
<td>ppb</td>
<td>Not regulated</td>
<td>60</td>
<td>6.94</td>
<td>1.31 to 6.94</td>
<td></td>
</tr>
<tr>
<td>Dibromochloroacetic Acid</td>
<td>ppb</td>
<td>Not regulated</td>
<td>N/A</td>
<td>4.3</td>
<td>1 to 4.3</td>
<td></td>
</tr>
<tr>
<td>Dichloroacetic Acid</td>
<td>ppb</td>
<td>Not regulated</td>
<td>0</td>
<td>8.5</td>
<td>3.9 to 8.5</td>
<td></td>
</tr>
<tr>
<td>Monobromochloroacetic Acid</td>
<td>ppb</td>
<td>Not regulated</td>
<td>N/A</td>
<td>2.3</td>
<td>0 to 2.3</td>
<td>By-products of drinking water disinfection; not regulated individually; included in Haloacetic Acids</td>
</tr>
<tr>
<td>Monochloroacetic Acid</td>
<td>ppb</td>
<td>Not regulated</td>
<td>70</td>
<td>3.9</td>
<td>1.5 to 3.9</td>
<td></td>
</tr>
<tr>
<td>Trichloroacetic Acid</td>
<td>ppb</td>
<td>Not regulated</td>
<td>20</td>
<td>2.2</td>
<td>0 to 2.2</td>
<td></td>
</tr>
</tbody>
</table>

### Drinking Water Quality Test Results

<table>
<thead>
<tr>
<th>Compoised</th>
<th>MRDL</th>
<th>MCLG</th>
<th>Your water</th>
<th>Range</th>
<th>Violation</th>
<th>Common Sources of Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total organic Carbon</td>
<td>ppm</td>
<td></td>
<td>2 0 4.64</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>TDS</td>
<td>ppm</td>
<td></td>
<td>10 0 15.32</td>
<td></td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

### Potential raw water impurities

- **Microbial 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **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 storm water runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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**TCEQ assesses raw water supply**

The Texas Commission on Environmental Quality annually completes an assessment of Fort Worth’s source water. TCEQ classified Fort Worth as “potentially high” in 2018.

A high susceptibility means there are activities near the source water or watershed that make it very likely that chemical components may come in to contact with the source water. It does not mean that there are any health risks present.

TCEQ’s Drinking Water Watch database provides more details about the assessments at https://dww2.tceq.texas.gov/DWW.

**Continued on page 9**
Fort Worth targets lead lines

The Fort Worth Water Department’s goal to eliminate all city-owned lead service lines by 2021 is well underway. For many years, crews removed lead lines as they were found during routine maintenance activities. The pace on those efforts, though, increased a few years ago when the city began collecting the GPS coordinates of meters citywide.

While crews recorded the meter coordinates, they also noted the service line material on both sides of the meter. That work was 75 percent completed in mid-May. So far, crews have recorded about 1,200 lead service lines on the city side of the meter and 16 on the customer side. Only one location had lead on both sides of the meter. As of March 2019, approximately 98 percent of the water meters inside Loop 820 have been surveyed.

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Fort Worth understands the importance of eliminating lead service lines. Elevated lead levels have been known to cause serious health problems, especially for pregnant women and young children. Lead in drinking water can come from lead service lines and lead-containing home plumbing components. It’s the customer’s responsibility when it comes to lead used on their side of the meter.

The utility is committed to doing its part to make sure all city-side lead service lines are removed and that residents are informed about the risks and ways to reduce exposure. Every time a lead service line is identified, staff provides the customer with information about the replacement of lead lines and details on how to minimize the potential for lead exposure. Risks are greatly reduced by simply flushing the tap for 30 seconds to 2 minutes before using water for drinking or cooking, especially after water has been sitting for several hours.

Customers are notified in writing when city-side lead service lines will be replaced as part of a capital improvement project.

Fort Worth offers customers with known lead service lines a free lab test. If you do not have known lead service lines, the cost is $15 per water sample. Call 817-392-4477 to make arrangements.

Information on lead in drinking water, testing methods and steps you can take to minimize your exposure is available from the Safe Drinking Water Hotline at www.epa.gov/safewater/lead or by calling 1-800-426-4791.

To meet federal compliance rules, Fort Worth samples 50 homes every three years for lead and copper. Compliance sampling was last performed in 2016 and will be performed in 2019. Fort Worth achieves corrosion control through pH adjustment.

Additional info at: www.FortWorthTexas.gov/water/lead
Conservation First

Imagine if about 760,000 Fort Worth residents decided not to take a bath one day. The effort, while not recommended, would save 38 million gallons of water, or the amount the city’s conservation efforts reached in 2018.

On average, each resident used 163 gallons of water a day last year, a decline of 48 gallons a day, from 216 gallons a day recorded in 2006. That’s a 22 percent drop.

The savings came from several programs, including one that won a prestigious Environmental Protection Agency award. The city’s conservation programs have been in place for more than a decade, all contributing to the decline in the amount of water used by individuals daily.

In 2018, the EPA named Fort Worth and its water utility a WaterSense Partner of the Year for its creativity in promoting water conservation.

The conservation staff collaborated with the agency on a 2017 Fix a Leak Week Hispanic outreach pilot program that involved developing materials in partnership with WaterSense, the EPA sponsored label for water-efficient products and resources.

The materials created here are now used nationwide.

In another program, nearly 3,700 high-efficiency toilets were distributed to Fort Worth residents who were trading in much older, high water use models.

Replacing high water-use toilets represents the bulk of the city’s water savings.

Other water savings come from tips and suggestions water conservation staff offer to residents who ask for evaluations on their irrigation systems. The evaluation is free to Fort Worth customers.

Last year, more than 500 evaluations were performed, saving hundreds of thousands of gallons of water. The evaluations include looking for leaks and suggestions for more efficient operations.

In the water loss audit submitted to the Texas Water Development Board for calendar year 2018, the Fort Worth system lost an estimated 7.9 billion gallons of water from the almost 69 billion gallons of water purchased.

Fort Worth’s Water Conservation Plan addresses water loss and has goals for lowering this over time. If you have any questions about the water loss audit, please contact Water Conservation Manager Micah Reed at 817-392-8211 or email Micah.Reed@FortWorthTexas.gov.
Maximum Contaminant Level (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 (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 (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 (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.

N/A: not applicable/does not apply

Nephelometric Turbidity Unit (NTU): a measure of water turbidity or clarity

Picocuries per liter (pCi/L): a measure of radioactivity

Parts per billion (ppb): Or represented as micrograms per liter (µg/L)

Parts per million (ppm): Or represented as milligrams per liter (mg/L)

Treatment Technique (TT): a required process intended to reduce the level of a contaminant in drinking water

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Treatment Technique (TT): a required process intended to reduce the level of a contaminant in drinking water

Want to know more about water?

Fort Worth Water has employees who volunteer to talk at Career Day presentations as well as work events for the department, city and community. The H2O Heroes talk about a typical work day, education training requirements and what students need to focus on in studies to have a career with the water department.

If you are interested in a school or community group presentation, email: wpe@FortWorthTexas.gov

Contact Us

Water Customer Service
817-392-4477
7 a.m. — 7 p.m. Monday—Friday
24-Hour Emergencies select Option 1

H2Online Home online billing:
https://h2online.fortworthtexas.gov/
Click2GovCX/index.html

Water Department Administrative Office
Fort Worth City Hall
200 Texas Street, 2nd floor
Fort Worth, TX 76102
www.FortWorthTexas.gov/water
www.SaveFortWorthWater.org

The Water Department is part of the City of Fort Worth, Texas. Council meetings are open to the public and take place three times a month, on Tuesdays, at 7 p.m. in the council chambers/second floor of city hall. See the City Calendar.
www.fortworthtexas.gov/calendar/council

Other Resources
Environmental Protection Agency
www.epa.gov
Texas Commission on Environmental Quality
www.tceq.texas.gov
Texas Water Development Board
www.twdb.texas.gov
American Water Works Association
www.awwa.org
Drink Tap
www.drinktap.org

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