City of Azle
Consumer Confidence Report
2018

This is the Annual Drinking Water Report for the period of January 1 to December 31, 2018.

This report is intended to provide you with important information about your drinking water and the efforts made by the City of Azle to provide safe drinking water. To request a paper copy of this report at no cost, please call 817-444-3751.

Public Participation Opportunity
Date: 06/04/2019 at 6:00 PM
Azle City Hall, 613 S.E. Parkway
817-444-2541

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzco al o hable con alguien que lo entienda bien. 817-444-2541 para hablar con una persona bilingüe en español.

Eagle Mountain Lake is our raw water source. It is owned and operated by the Tarrant County Water Control and Improvement District No. 1. Construction of the dam began on January 23, 1930, and was completed October 24, 1932. Impoundment of water began on February 28, 1934. The reservoir has a normal capacity of 190,460 acre-feet* and a maximum capacity of 680,335 acre-feet; its surface area at normal capacity is 9,200 acres and at maximum capacity, 19,050 acres.

* 1 acre/ft = 325,851 gallons.

On average, the City of Azle consumed 1.6 million gallons per day—this equates to 569 million gallons drawn from Eagle Mountain Lake this year.

Sections & Topics

- The Water Treatment Process
- Special Notice / Information on Source Water
- Source Water Assessment & Terminology
- Regulated Contaminants Results
- Unregulated Contaminants Results
- LT2 Enhanced Surface Water Treatment Rule
- Bacteriological Testing
- Lead & Copper Information
- Water Aesthetics—Taste, Odor, and Color
- The Distribution System
- Water Hardness Facts
- Water Conservation & Water Audit Information
The Water Treatment Process

The Azle Water Treatment Plant produces high quality water that exceeds state drinking water standards for removal of bacteriological and chemical contaminants. Our staff is certified by the Texas Commission on Environmental Quality (TCEQ) and is dedicated to serving the needs of residential and commercial customers.

The diagram below illustrates the various stages by which lake water is treated to produce potable water.

1. Our raw water pump station is capable of supplying 6 million gallons of raw water per day.
2. Compounds are added to the raw water in a mixing chamber to disinfect and remove particles.
3. In this stage, particles such as silt settle to the bottom and are removed—further clarifying the water.
4. Water is then filtered through anthracite and sand, removing additional particles from Stage 3.
5. Additional disinfectant is added at this stage and pH adjustment helps produce water that is non-corrosive to pipes in the distribution system.
6. 2.5 million gallons are stored on site to assure adequate supply. An additional 1.5 million is available in the two elevated storage tanks located within the city.
7. Five High Service pumps supply water and keep the distribution system pressurized.
8. Safe potable water arrives to your home.

Water quality tests are performed regularly throughout the day to assure that we are producing safe and superior water. Bacteriological samples are obtained from the distribution system and TCEQ monitors drinking water parameters throughout the year to assure quality and safety of the water we produce.

Tours of the plant are available by appointment only. For information, please call 817-444-3751.
Immuno-compromised persons such as persons undergoing chemotherapy, organ transplant recipients, persons 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/CIC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

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. We cannot control the variety of materials used in plumbing components. 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 www.epa.gov/safewater/lead.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap water and bottle 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 contaminants that may be present in the source. Our source of surface water is Eagle Mountain Lake. The City of Azle monitors for the following:

- **Microbial contaminants** such as viruses and bacteria, which may come from sewage treatment plant, septic systems, agriculture livestock operations
- **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, or farming
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture and urban storm water runoff
- **Organic chemical contaminants** including: synthetic and 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
Information About Source Water Assessments

The TCEQ is currently updating a Source Water Susceptibility Assessment for your drinking water. The information contained in the assessment allows us to focus on source water protection strategies.

For more information, please refer to the Source Water Assessment Viewer at http://www.tceq.texas.gov/gis/swaview

Further details about Source Water Assessments are available at Drinking Water Watch http://dww2.tceq.texas.gov/DWW/

Information About Secondary Contaminants

Many elements (such as calcium, sodium, or iron) that are often found in drinking water can cause taste, color, and odor problems. The taste and odor elements are called secondary contaminants and are regulated by the State of Texas, not the EPA. These contaminants are not cause for health concerns. Therefore, secondary contaminants are not required to be reported in this document, but they may greatly affect the appearance and taste of your water. Refer to the section following the analyses for more information.

Analytical Terminology

Level 1 Assessment A level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment A level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level Goal (MCLG) is the level of a contaminant below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL) is 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 Residual Disinfectant Level Goal (MRDLG) is 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.

Average (Avg): Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Parts Per Million (ppm): milligrams per liter—one ounce in 7,350 gallons of water.

Parts Per Billion (ppb): micrograms per liter—one ounce in 7,350,000 gallons of water.

TTL: Total.

Definition: Explanation for contaminant source(s), or scientific terms.

Detection Limit: The lowest residual that an analytical procedure detects.
2018 Regulated Contaminants

Regulated contaminants are those that have an established MCL. The EPA has determined that these contaminants may have potential adverse effects on health when exceeding the MCL. Regulated contaminants found in Azle are all well below maximum contaminant levels.

Coliform Bacteria (Collected monthly)  See page 9 for more details.

<table>
<thead>
<tr>
<th>MCLG</th>
<th>MCL TTL Coliform</th>
<th>Reported TTL Coliform</th>
<th>Fecal Coliform MCL</th>
<th>Reported Fecal Coliforms</th>
<th>Violation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1 per month</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>NONE</td>
<td>Naturally present in the environment</td>
</tr>
</tbody>
</table>

Lead and Copper (found in plumbing fixtures)

Action Level Goal (ALG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety. Action Level (AL) is the concentration of a contaminant, which, if exceeded, triggers treatment of other requirements that a water system must follow. See page 10 for more details.

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Date Sampled</th>
<th>MCLG</th>
<th>AL</th>
<th>90th PERCENTILE</th>
<th># Sites over AL</th>
<th>Unit</th>
<th>Violation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>08/01/2016</td>
<td>&lt;1.3</td>
<td>1.3</td>
<td>0.49</td>
<td>0</td>
<td>ppm</td>
<td>NONE</td>
<td>Erosion of natural deposits; Corrosion of household plumbing system</td>
</tr>
<tr>
<td>Lead</td>
<td>08/01/2016</td>
<td>0</td>
<td>0.015</td>
<td>0.005</td>
<td>0</td>
<td>ppm</td>
<td>NONE</td>
<td></td>
</tr>
</tbody>
</table>

Disinfectants and Disinfection By-Products

Not all sample results may have been used for calculating the Highest Level Detected (HLD) because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

<table>
<thead>
<tr>
<th>Disinfectant and Disinfection By-Product</th>
<th>Collection Date</th>
<th>Highest Level Detected</th>
<th>Range of Levels Detected</th>
<th>MCLG</th>
<th>MCL</th>
<th>Unit</th>
<th>Violation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloramines</td>
<td>2018</td>
<td>4.0</td>
<td>0.0 – 4.0</td>
<td>&lt; 4.0</td>
<td>4.0</td>
<td>ppm</td>
<td>NONE</td>
<td>Disinfectant used to control microbes</td>
</tr>
<tr>
<td>Haloacetic Acids (HAA5)</td>
<td>04/11/18</td>
<td>27.0</td>
<td>9.1 – 28.5</td>
<td>No goal</td>
<td>60</td>
<td>ppb</td>
<td>NONE</td>
<td>By-product of chlorination</td>
</tr>
<tr>
<td>Trihalomethanes</td>
<td>10/17/18</td>
<td>35.0</td>
<td>21.5 – 27.3</td>
<td>No goal</td>
<td>80</td>
<td>ppb</td>
<td>NONE</td>
<td>By-product of chlorination</td>
</tr>
</tbody>
</table>
# Inorganic Contaminants Collected 01/18/18

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Highest Level Detected</th>
<th>Detection Limit</th>
<th>MCLG</th>
<th>MCL</th>
<th>Unit</th>
<th>Violation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>&lt;0.001</td>
<td>0.0004</td>
<td>0</td>
<td>0.010</td>
<td>ppm</td>
<td>NONE</td>
<td>Erosion from natural deposits and drilling waste</td>
</tr>
<tr>
<td>Barium</td>
<td>0.056</td>
<td>0.0004</td>
<td>2.0</td>
<td>2.0</td>
<td>ppm</td>
<td>NONE</td>
<td>Erosion from natural deposits and drilling waste</td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt;0.001</td>
<td>0.0004</td>
<td>0.1</td>
<td>0.1</td>
<td>ppm</td>
<td>NONE</td>
<td>Erosion from natural deposits and drilling waste</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.145</td>
<td>0.005</td>
<td>4.0</td>
<td>4.0</td>
<td>ppm</td>
<td>NONE</td>
<td>Water additive</td>
</tr>
<tr>
<td>Mercury</td>
<td>&lt;0.0002</td>
<td>0.0002</td>
<td>0.002</td>
<td>0.002</td>
<td>ppm</td>
<td>NONE</td>
<td>Erosion of natural deposits; discharge from factories; runoff from landfills; runoff from cropland</td>
</tr>
<tr>
<td>Nitrate (as Nitrogen)*</td>
<td>0.162</td>
<td>0.0100</td>
<td>10.0</td>
<td>10.0</td>
<td>ppm</td>
<td>NONE</td>
<td>Erosion from natural deposits; Runoff from fertilizer, septic tanks, sewage</td>
</tr>
<tr>
<td>Selenium</td>
<td>&lt;0.005</td>
<td>0.00200</td>
<td>0.05</td>
<td>0.05</td>
<td>ppm</td>
<td>NONE</td>
<td>Erosion from natural deposits and drilling waste</td>
</tr>
</tbody>
</table>

## Turbidity (NTU: Nephelometric Turbidity Units—a measure of water clarity)

<table>
<thead>
<tr>
<th>Item</th>
<th>Limit (Treatment Technique)</th>
<th>Level Detected</th>
<th>Violation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Single Measurement in 2018</td>
<td>1 NTU</td>
<td>0.280 NTU</td>
<td>NONE</td>
<td>Soil Runoff</td>
</tr>
<tr>
<td>Lowest Monthly % Meeting Limit</td>
<td>0.3 NTU</td>
<td>100%</td>
<td>NONE</td>
<td>Soil Runoff</td>
</tr>
</tbody>
</table>

## Synthetic Organic Contaminants (pesticides and herbicides) Collected 07/31/2018

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Highest Level Detected</th>
<th>Detection Limit</th>
<th>MCLG</th>
<th>MCL</th>
<th>Units</th>
<th>Violation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alachlor</td>
<td>&lt;0.10</td>
<td>0.05</td>
<td>0</td>
<td>2.0</td>
<td>ppb</td>
<td>NONE</td>
<td>Soil Runoff--Herbicide</td>
</tr>
<tr>
<td>Atrazine</td>
<td>&lt;0.10</td>
<td>0.05</td>
<td>3.0</td>
<td>3.0</td>
<td>ppb</td>
<td>NONE</td>
<td>Soil Runoff--Herbicide</td>
</tr>
<tr>
<td>Benzene</td>
<td>&lt;0.5</td>
<td>0.250</td>
<td>0</td>
<td>5.0</td>
<td>ppb</td>
<td>NONE</td>
<td>Soil Runoff--Insecticide</td>
</tr>
</tbody>
</table>
Radioactive Contaminants (pCi / L: picocuries per liter—a measure of radioactivity. Tests are performed in 6 year cycles unless MCLs are exceeded)

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Collection Date</th>
<th>Highest Level Detected</th>
<th>Minimum Detected Activity</th>
<th>MCLG</th>
<th>MCL</th>
<th>Units</th>
<th>Violation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta/photon emitters</td>
<td>01/23/2017</td>
<td>6.3</td>
<td>1.2</td>
<td>0</td>
<td>4.0</td>
<td>Mrem / year</td>
<td>NONE</td>
<td>Decay of natural and manmade deposits</td>
</tr>
<tr>
<td>Combined Radium 226/228</td>
<td>01/23/2017</td>
<td>&lt;1.0</td>
<td>0.43</td>
<td>0</td>
<td>5.0</td>
<td>pCi/L</td>
<td>NONE</td>
<td>Erosion from natural deposits</td>
</tr>
</tbody>
</table>

UNREGULATED CONTAMINANTS are those for which the 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. See pages 11 & 13 for more information.

No associated adverse health effects.

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Collection Date</th>
<th>Level Detected</th>
<th>Secondary Limit</th>
<th>Unit</th>
<th>Violation</th>
<th>Source of Constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicarbonate</td>
<td>01/18/18</td>
<td>114.0</td>
<td>None</td>
<td>ppm</td>
<td>NONE</td>
<td>Corrosion of carbonate rock such as, limestone</td>
</tr>
<tr>
<td>Chloride</td>
<td>01/18/18</td>
<td>51</td>
<td>250</td>
<td>ppm</td>
<td>NONE</td>
<td>Naturally occurring element used in water purification</td>
</tr>
<tr>
<td>Hardness as Ca/Mg</td>
<td>01/18/18</td>
<td>132</td>
<td>None</td>
<td>ppm</td>
<td>NONE</td>
<td>Naturally occurring calcium and magnesium</td>
</tr>
<tr>
<td>pH</td>
<td>01/18/18</td>
<td>7.99</td>
<td>6.5-8.5</td>
<td>Units</td>
<td>NONE</td>
<td>Measure of corrosivity of water</td>
</tr>
<tr>
<td>Sodium</td>
<td>01/18/18</td>
<td>33.4</td>
<td>None</td>
<td>ppm</td>
<td>NONE</td>
<td>Erosion of natural deposits; byproduct of oil field activity</td>
</tr>
<tr>
<td>Sulfate</td>
<td>01/18/18</td>
<td>30.8</td>
<td>250</td>
<td>ppm</td>
<td>NONE</td>
<td>Naturally occurring; common industrial byproduct; byproduct of oil field activity</td>
</tr>
<tr>
<td>Total Alkalinity as CaCO₃</td>
<td>01/18/18</td>
<td>114</td>
<td>None</td>
<td>ppm</td>
<td>NONE</td>
<td>Naturally occurring soluble mineral salts</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>01/18/18</td>
<td>240</td>
<td>500</td>
<td>ppm</td>
<td>NONE</td>
<td>Total dissolved mineral constituents in water</td>
</tr>
</tbody>
</table>
The Fourth Unregulated Contaminant Monitoring Rule (UCMR 4)

General Information

What is the Unregulated Contaminant Monitoring Rule?
The 1996 amendments to the Safe Drinking Water Act (SDWA) require that once every five years, the U.S. Environmental Protection Agency (EPA) issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs). The Unregulated Contaminant Monitoring Rule (UCMR) provides EPA and other interested parties with scientifically valid data on the occurrence of contaminants in drinking water. This national survey is one of the primary sources of information on occurrence and levels of exposure that the Agency uses to develop regulatory decisions for contaminants in the public drinking water supply.

The "Revisions to the Unregulated Contaminant Monitoring Rule (UCMR 4) for Public Water Systems and Announcement of Public Meeting" was published in the Federal Register on December 20, 2016 (81 FR 92666). UCMR 4 monitoring will occur from 2018-2020 and includes monitoring for a total of 30 chemical contaminants: 10 cyanotoxins (nine cyanotoxins and one cyanotoxin group) and 20 additional contaminants (two metals, eight pesticides plus one pesticide manufacturing byproduct, three brominated haloacetic acid [HAA] disinfection byproducts groups, three alcohols, and three semivolatile organic chemicals [SVOCs]).

What contaminants are systems monitoring for under UCMR 4?
Under UCMR 4, PWSs will conduct sampling for Assessment Monitoring ("List 1") contaminants as shown in the table below. For additional information on these contaminants, please review the contaminant-specific UCMR 4 Fact Sheets.

10 Cyanotoxins (Nine Cyanotoxins and One Cyanotoxin Group)

<table>
<thead>
<tr>
<th>total microcystins</th>
<th>microcystin-LA</th>
<th>microcystin-RR</th>
<th>microcystin-LF</th>
<th>microcystin-YR</th>
</tr>
</thead>
<tbody>
<tr>
<td>microcystin-LR</td>
<td>microcystin-LY</td>
<td>nodularin</td>
<td>cylindrospermopsin</td>
<td>anatoxin-a</td>
</tr>
</tbody>
</table>

20 Additional Contaminants

<table>
<thead>
<tr>
<th>germanium</th>
<th>manganese</th>
<th>alpha-hexachlorocyclohexane</th>
<th>profenofos</th>
<th>chlorpyrifos</th>
</tr>
</thead>
<tbody>
<tr>
<td>tebuconazole</td>
<td>dimethipin</td>
<td>total permethrin (cis- &amp; trans-)</td>
<td>ethoprop</td>
<td>tribufos</td>
</tr>
<tr>
<td>oxyfluorfen</td>
<td>HAAS³</td>
<td>HAA6Br³</td>
<td>HAA9¹</td>
<td>1-butanol</td>
</tr>
<tr>
<td>2-propan-1-ol</td>
<td>2-methoxyethanol</td>
<td>butylated hydroxyanisole</td>
<td>o-toluidine</td>
<td>quinoline</td>
</tr>
</tbody>
</table>

1. HAAS (dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid); HAA6Br (bromochloroacetic acid, bromodichloroacetic acid, dibromoacetic acid, chlorodibromoacetic acid, monobromoacetic acid, tribromoacetic acid); HAA9 (bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, and trichloroacetic acid).

Which water systems will participate in UCMR 4?
Approximately 6,000 PWSs will participate in UCMR 4. All community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) serving more than 10,000 people (i.e., large systems) are required to monitor:

- All large surface water (SW) and ground water under the direct influence of surface water (GWUDI) systems will monitor for cyanotoxins and the 20 additional contaminants.
- All large ground water systems will monitor for the 20 additional contaminants.
Of the CWSs and NTNCWSs serving 10,000 or fewer people (i.e., small systems):

- A nationally representative set of 800 randomly selected SW and GWUDI small systems will monitor for cyanotoxins.
- A different set of 800 randomly selected small systems will monitor for the 20 additional contaminants. Note that any PWS that is not subject to HAAS monitoring under the D/DBPRs (40 CFR 141. Subparts L and V) is not required to monitor for the UCMR 4 HAAs or associated indicators (total organic carbon (TOC) and bromide). Also, transient non-community water systems (TNCWSs) are not required to monitor under UCMR 4.

Where will samples be collected?

UCMR 4 samples will be collected at entry points to the distribution system (EPTDS) for all contaminant groups except for the HAAs, which will be taken in the distribution system. Sampling for the HAA indicators (TOC and bromide) will take place at a single source water influent for each treatment plant.

What does UCMR 4 participation involve?

All large systems and only small systems notified by their state or EPA, will collect samples and have them analyzed for UCMR 4 contaminants. As with previous UCMRs, large PWSs pay for their own testing. EPA pays for the analytical costs for the selected small systems.

All laboratories conducting analyses for UCMR 4 contaminants must receive EPA UCMR approval to perform those analyses.

How did EPA select the UCMR 4 contaminants?

The Contaminant Candidate List (CCL) was the primary source of priority contaminants considered for UCMR 4. The CCL is a list of contaminants that are not currently addressed by national primary drinking water regulations, are known or anticipated to occur at public water systems and may warrant regulation. The EPA selected the UCMR 4 contaminants using a stepwise prioritization process. The first step identified contaminants that were not monitored under UCMR 2 or UCMR 3, may have significant occurrence nationally; and have a completed, validated drinking water method. The next step focused on contaminants associated with one or more of the following considerations: an available health assessment to facilitate regulatory determinations; high public concern; critical health endpoints (e.g., likely or suggestive carcinogen); active use (e.g., pesticides); and/or an occurrence data gap. During the final step, EPA considered workgroup and stakeholder input; looked at cost-effectiveness of analytical methods (i.e., can a single method address multiple contaminants of interest); considered implementation factors (e.g., laboratory capacity); and further evaluated health, occurrence and persistence/mobility data to identify the list of 30 UCMR 4 contaminants.

What are the public health benefits of the UCMR program?

The UCMR program provides the EPA and other interested parties with nationally representative data on the occurrence of particular contaminants in drinking water, the number of people potentially being exposed and an estimate of the levels of that exposure. In accordance with SDWA, EPA will consider the occurrence data from UCMR 4 and other sources, along with the peer reviewed health effects assessments, to support a regulatory determination on whether to initiate the process to develop a national primary drinking water regulation.

Where can consumers find UCMR results?

CWSs are required to address their UCMR monitoring results in their annual Consumer Confidence Report (CCR) whenever unregulated contaminants are detected. CCRs are delivered to all billing customers each year by July 1. (The CCR Rule does not apply to non-community water systems). To obtain a copy of your CCR, you should contact your water supplier or you may find information for how to obtain a copy of the CCR in your water bill. Additional information about the CCR including details on reporting requirements can be found on the CCR Homepage.

All PWs are required to report their data to EPA as outlined in the UCMR. The analytical results from UCMR 4 (and previous UCMRs) are stored in the National Contaminant Occurrence Database (NCOD) for drinking water. For a summary of the NCOD results, tips for querying NCOD and health effects information (including reference concentrations), please refer to the UCMR 4 Data Summary document.

How can I learn more?

General information is available on the UCMR web page or by calling the Safe Drinking Water Hotline at 1-800-426-4791.
The USEPA states, "In the past 15 years, we have learned that there are specific microbial pathogens, such as Cryptosporidium, which can cause illness, and are highly resistant to traditional disinfection practices.

"The purpose of the LT2 rule is to reduce illness linked with the contaminant Cryptosporidium and other disease-causing microorganisms in drinking water. The rule supplements existing regulations by targeting additional Cryptosporidium treatment requirements to water sources that show higher Cryptosporidium levels."

Each month, the City of Azle is responsible for collecting samples from our raw water source, Eagle Mountain Lake, and submitting the samples to an approved laboratory for analysis to determine if the microbe is present.

Cryptosporidium enteritis is an infection of the small intestine that is caused by the parasite Cryptosporidium. Infection is through contaminated material such as earth, water, uncooked or cross-contaminated food that has been in contact with the feces of an infected individual or animal.

Millions of Cryptosporidium organisms (oocysts) can be released in the bowel movement of an infected human or animal. You can become infected after accidentally ingesting the oocysts.

Contact must then be transferred to the mouth and swallowed. It is especially prevalent amongst those in regular contact with bodies of fresh water including recreational water such as swimming pools.

Other potential sources include insufficiently treated water supplies, contaminated food, or exposure to feces. Some outbreaks have happened in day care related to diaper changes. The high resistance of Cryptosporidium oocysts to disinfectants such as chlorine bleach enables them to survive for long periods and remain infective.

The initial round of testing began in 2008-10 and resulted in no detection of Cryptosporidium in our raw water source.

The new round of testing began October 2016 and was completed in September 2018. No samples produced any Cryptosporidium microbes.

More information on LT2 may be found here:
https://www.epa.gov/dwreginfo/long-term-2-enhanced-surface-water-treatment-rule-documents#Overview
https://www.cdc.gov/parasites/crypto/gen_info/infect.html
Bacteriological Testing

Azle’s Commitment to Safe Potable Water

Testing for Coliforms

The Texas Commission on Environmental Quality (TCEQ) sets drinking water standards in Texas and has determined that the presence of total coliform is a possible health concern. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Where Do We Collect Samples?

Each month, the City collects 16 samples from designated locations that are representative of the distribution system (shown in the illustration at right). New water lines are also tested before being put into service. Samples are collected by a State certified operator and delivered to the Tarrant County Health Department lab for analysis.

How are Samples Analyzed & What Happens with the Results?

Samples are analyzed using a Presence / Absence method; simply put, coliforms are either present, or not. This process involves a 24-hour incubation period once a selective media (food for bacteria) is added to each sample collected. If bacteria are present a color change in the sample occurs; otherwise, the sample stays clear (illustration at left). The lab reports results to the City and the TCEQ to decide if any further action is necessary. If a sample is positive, the City is required to resample within 24-hours to determine if sampling error caused the positive result; sampling error is the most common reason for positive samples.

For more information on this and other water related topics, please contact the Azle Water Treatment Plant at 817-444-3751.
Lead and copper enter drinking water primarily through plumbing materials. Exposure to excessive amounts of lead and copper may cause health problems ranging from stomach distress to brain damage. On June 7, 1991, EPA published a regulation to control lead and copper in drinking water. This regulation is known as the Lead and Copper Rule (also referred to as the LCR or 1991 Rule). The treatment technique for the rule requires systems to monitor drinking water at customer taps. If lead concentrations exceed an action level of 15 ppb (parts per billion), or copper concentrations exceed an action level of 1.3 ppm in more than 10% of customer taps sampled, the system must undertake a number of additional actions to control corrosion. If the action level for lead is exceeded, the system must also inform the public about steps they should take to protect their health and may have to replace lead service lines under their control. For complete information and updates to the LCR, visit the USEPA’s website. http://water.epa.gov/lawsregs/rulesregs/sdwa/lcr/lcrmr_index.cfm

Information on how the City of Azle tests for lead and copper can be located by following this link to the Texas Commission on Environmental Quality’s website. https://www.tceq.texas.gov/drinkingwater/chemicals/lead_copper/lead-copper.html

Azle’s Commitment to Water Treatment Technique, Testing and Results.

As required by the TCEQ, the City of Azle conducts lead and copper testing from 30 locations every three years. This sampling schedule was initiated by the TCEQ because we have never exceeded an action level for either contaminant. In fact, sample results for the past 15 years have shown that water treatment techniques used by the Azle Water Treatment Plant (AWTP), along with routine distribution system maintenance, have proven effective in suppressing contaminants.

The AWTP carefully monitors and adjusts the pH of the water entering the distribution system in order to maintain a water quality that prevents excessive levels of lead and copper from escaping plumbing fixtures in your home. However, if you are concerned about these issues, a good practice is to allow the water taps in your home to flush for a few minutes after the fixtures have been unused for eight hours. For example, if a bathroom faucet is only used in the morning, run the faucet for a few minutes before it is used the next morning. Furthermore, there are relatively inexpensive commercially available filters that remove metals and minerals from drinking water.
How does the City respond to the issues?

The City of Azle takes pride in the quality of water we supply to our community. We take every measure to assure that raw water from the lake is purified, disinfected, and delivered to your home according to State regulations.

We understand that at times there may be taste, odor, or color issues that can be inconvenient for our residents. The most common practice for the removal of aesthetic issues is to flush water lines through the many fire hydrants within the City.

You can help minimize taste and odor issues in your home by running water in your sinks or bathtub until the issue is gone. Also, periodically flushing your hot water heater helps remove minerals deposits that contribute aesthetic issues.

Taste and Odor

Taste and odor in drinking water occurs naturally in the source, Eagle Mountain Lake. The major contributors are various algae, which produce a harmless by-product called geosmin that creates an “earthy” or “muddy” taste. Typically, geosmin levels in the lake average 20-40 ppt (part per trillion); however, during summer and winter, geosmin levels have reached as high as 400 ppt.

The second reason for unpleasant taste and odor is often referred to as “lake turn-over.” Water temperatures at various depths shifts, causing a poorer quality of water to rise closer to the surface—this generally occurs in Spring and Fall when ambient temperature fluctuates most.

Water with high geosmin and turn-over issues is difficult to treat; however, we are implementing various treatment techniques that have aided in the removal of taste and odor.

Color

Color is another aesthetic issue that arises from time to time in any distribution system. “Red water” is primarily due to corrosion (rust build-up in metal pipe) that occurs in parts of the 96 miles of pipe in our system.

Although there are no associated adverse health effects, we understand that high color in your water is undesirable. The only remedy to the effect is to flush water mains.

If you experience taste, odor, or color in your water, please call 817-444-2541 to report the issue. If you have further questions regarding water quality, please call the Azle Water Treatment Plant 817-444-3571.
The potable water distribution system for the City of Azle consists of the Azle Water Treatment Plant; 96 miles of pipe through which potable water is transferred to businesses and residences; and, two elevated storage tanks. In all, the City maintains nearly 4 million gallons of water in storage to ensure an adequate supply.

The distribution system is very complex. Not only does pipe size change for example, a transmission line may be a 16” pipe that eventually works down to a 2” service line; but also, pipe composition can vary from iron to PVC—both size and composition can affect water quality.

Other features of the distribution system that have potential to affect water quality are: cross connection prevention devices; valve and fire hydrant maintenance, (these elements can affect the direction of flow and pressure); line repair and new additions, likewise may affect water quality by creating disruptions to existing lines. Therefore, considering the complexity of the distribution system, just through these few examples, the only way to verify the quality of water that we serve to our customers is by routinely sampling a wide variety of locations throughout the system. By doing so, we monitor the “health” of our distribution system. In addition, the City will routinely flush water mains through fire hydrants to help improve water quality.

System-wide pressure studies show an average system pressure of 96 PSI and a minimum of 83 PSI.

Flushing Water Lines

At first glance, it seems like flushing is a waste of water—especially considering water restrictions during drought conditions. However, flushing is vital to routine system maintenance. Flushing lines through fire hydrants removes mineral buildup and helps to maintain chlorine residual throughout the system. In addition, it gives the City an opportunity to test hydrants for pressure and flow for fire protection. By routinely flushing, we actually minimize water loss because as water quality improves, hydrants can be flushed for shorter periods.

City employees are the only persons allowed to test hydrants. To help prevent water theft, please contact City Hall at 817-444-2541 and report running hydrants.

Water Loss Information

In the water loss audit submitted to the Texas Water Development Board for the period of Jan 1st to Dec 31st 2018, our system lost an average of 4.18 gallons of water per connection per day (GPCPD). This amount equates to 3.20% of the total volume of water produced in a year and is an exceptionally low volume. “Water loss” is water that cannot be accurately accounted for such as, water used in fighting fires, flushing water mains, testing fire hydrants, broken water mains, undetected leaking water mains, water theft, etc. If you have any questions regarding the water loss audit, please call 817-444-3751.
Carbonate and bicarbonate compounds formed from calcium and magnesium dissolved in water are the two minerals responsible for making water "hard" or "soft" depending on the amounts present. Hard water requires more soap and detergents for laundry and bathing, and contributes to scaling (commonly known as lime buildup); soft water has the opposite effect.

Our water is considered "moderately hard" and at times "hard" as rain dissolves the limestone present in our soil and deposits the minerals into the lake. There are no adverse health effects associated with these minerals in water.

Some dishwashers have settings for water hardness expressed as grains per gallon. The following scale will help you determine what setting is right for your unit.

<table>
<thead>
<tr>
<th>Grains Per Gallon</th>
<th>mg/L or ppm</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 1.0</td>
<td>less than 17.1</td>
<td>Soft</td>
</tr>
<tr>
<td>1.0 - 3.5</td>
<td>17.1 - 60</td>
<td>Slightly Hard</td>
</tr>
<tr>
<td>3.5 - 7.0</td>
<td>60 - 120</td>
<td>Moderately Hard</td>
</tr>
<tr>
<td>7.0 - 10.5</td>
<td>120 - 180</td>
<td>Hard</td>
</tr>
<tr>
<td>over 10.5</td>
<td>over 180</td>
<td>Very Hard</td>
</tr>
</tbody>
</table>

For more information, contact the Azle Water Treatment Plant at 817-444-3751.
Although it has been several years since drought conditions in the area required watering restrictions, it is still important to remain mindful of the critical need to protect our most precious resource. The rainfall we received throughout this year replenished our lakes and reservoirs, but we must always be aware that drought conditions will return and we must be prepared by conserving.

The City of Azle is dedicated to minimizing water loss through its Drought Contingency Plan, found here: [http://www.cityofazle.org/DocumentCenter/View/2696](http://www.cityofazle.org/DocumentCenter/View/2696)

The plan contains water conservation information, and watering restrictions based on data from the Tarrant Regional Water District. More information on contingency plans may be found here: [https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/contingency.html](https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/contingency.html)

Water Pollution: Facts & Prevention

Water pollution can be defined in many ways. Usually, it means one or more substances have built up in water to such an extent that they cause problems for animals or people. Items such as trash, automotive fluids, and silt are deposited in Eagle Mountain Lake through storm drains and can degrade water quality. Therefore, it is up to us to help prevent these from entering our source of drinking water. Twice annually, the City sponsors a waste collection day for hazardous household items such as, chemicals and tires. For more information, please call 817-444-2541. In addition, the City provides a station where used motor oil can be dropped off for recycling. It is located at 470 Denver Trail.

Water Conservation Websites for Helpful Tips and Guidance

- [https://www.facebook.com/TxLawnWhisperer](https://www.facebook.com/TxLawnWhisperer)
- [http://www.trwd.com](http://www.trwd.com)
- [http://www.savetarrantwater.com/default.aspx](http://www.savetarrantwater.com/default.aspx)
- [http://www.twca.org](http://www.twca.org)
- [http://texaslivingwaters.org](http://texaslivingwaters.org)

Drinking Water

At the Correct Time Maximizes its Effectiveness On The Human Body

- *2 Glasses Of Water After Waking Up - Helps Activate Internal Organs*
- *1 Glass of Water 30 Minutes Before a Meal - Helps Digestion*
- *1 Glass of Water Before taking a bath/shower - helps Lower Blood Pressure*
- *1 Glass of water before Going to Bed - Avoids Stroke or Heart Attack*

Happy Drinking (H2O)!!