PWS ID TX2200002

City of Azle
Consumer Confidence Report
2015

This is the Annual Drinking Water Report for the period of January 1 to December 31, 2015.

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: 05/17/2016 at 6:00 PM
Azle City Hall, 613 S.E. Parkway
817-444-2541

Este informe contiene información muy importante sobre el aqua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien. 817-444-2541 para hablar con una persona bilingue en espanol.

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.

Sections

- The Water Treatment Process
- Special Notice / Information on Source Water
- Source Water Assessment & Terminology
- Regulated Contaminants Results
- Unregulated Contaminants Results
- Water Aesthetics—Taste, Odor, & Color
- Water Conservation & Water Audit Information

City of Azle
Community & Opportunity

On average, the City of Azle consumes 1.4 million gallons per day—this equates to 500 million gallons drawn from Eagle Mountain Lake per year.

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.

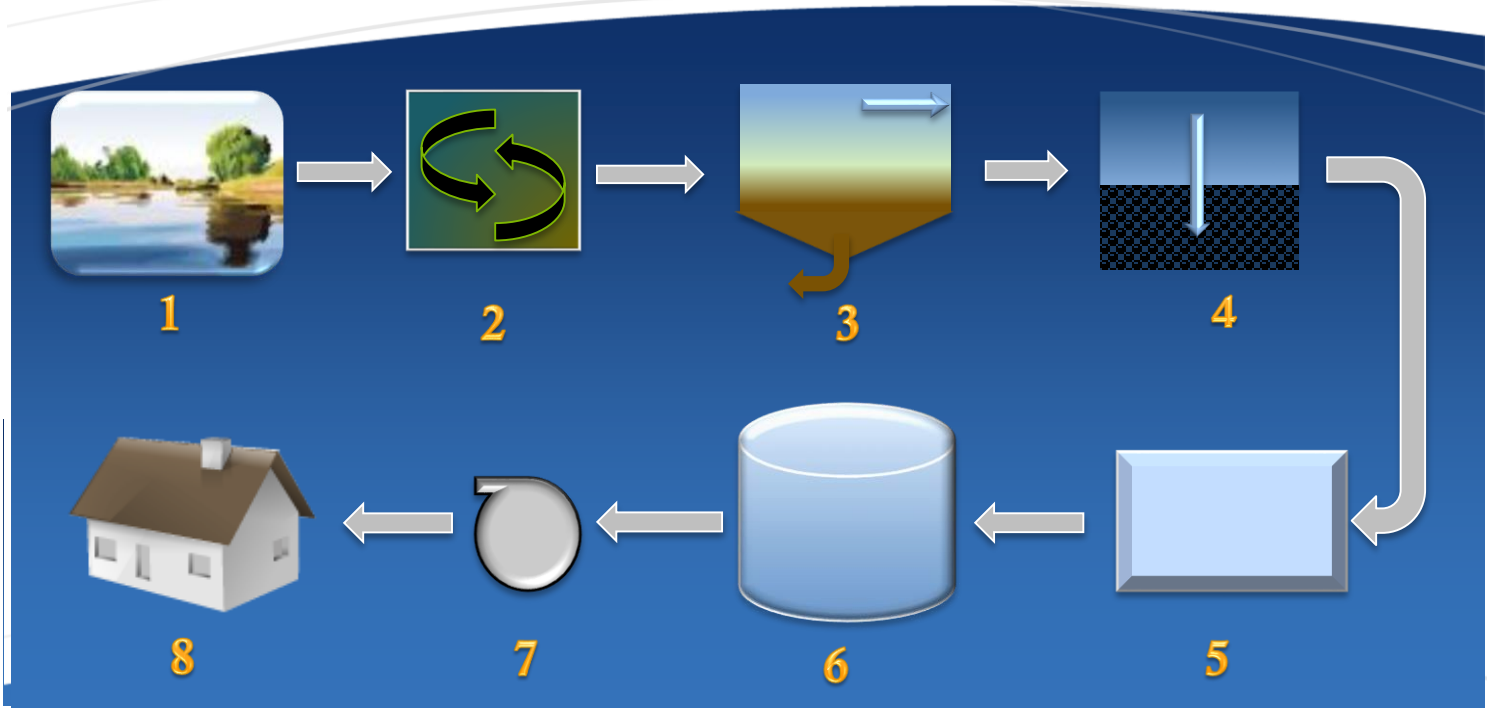
The diagram below illustrates the various stages by which lake water is treated to produce potable water.

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 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. PH adjustment occurs at this stage. 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. There are 5 High Service pumps that supply water and keep the distribution system pressurized.
8. Safe potable water arrives to your home.

Above, an aerial view of the Azle Water Treatment Plant

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.



SPECIAL NOTICE

Required Language for ALL Community Public Water Systems

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.

Information on Sources of Water

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 constituents (such as calcium, sodium, or iron) that are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not cause for health concerns. Therefore, secondary constituents 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

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) 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 7350 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.

2015 Regulated Contaminants

Regulated contaminants are those that have an established MCL. The EPA has determined that these contaminates 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

MCLG	MCL TTL Coliform	Reported TTL Coliform	Fecal Coliform MCL	Reported Fecal Coliforms	Violation	Definition
0	1 per month	0	0	0	None	Naturally present in the environment

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 8 for more details.

Contaminant	Date Sampled	MCLG	AL	90TH PERCENTILE	# Sites over AL	Unit	Violation	Definition
Copper	09/23/2013	<1.3	1.3	0.772	0	ppm	None	Erosion of natural deposits; Corrosion of household plumbing system
Lead	09/25/2013	0	15	2.8	0	ppb	None	

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.

Disinfectant and Disinfection By-Product	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit	Violation	Definition
Chloramines	2015	4.0	4.0 – 4.0	< 4.0	4.0	ppm	None	Disinfectant used to control microbes
Haloacetic Acids (HAA5)	07/20/15	92.2	7.6 – 92.2	No goal	60	ppb	None	By-product of chlorination
TTL Trihalomethanes	07/20/15	63.0	16.8 – 63.0	No goal	80	ppb	None	By-product of chlorination

Inorganic Contaminants Collected 03/02/15

Contaminant	Highest Level Detected	Detection Limit	MCLG	MCL	Unit	Violation	Definition
Arsenic	<0.00070	0.0007	0	0.10	ppm	None	Erosion from natural deposits and drilling waste
Barium	0.070	0.0007	2	2	ppm	None	Erosion from natural deposits and drilling waste
Chromium	0.00068	0.0004	0.1	0.1	ppm	None	Erosion from natural deposits and drilling waste
Fluoride	0.518	0.050	4	4.0	ppm	None	Water additive
Mercury	<0.00007	0.000070	0	2.0	ppm	None	Erosion of natural deposits; discharge from factories; runoff from landfills; runoff from cropland
Nitrate (as Nitrogen)*	0.144	0.0100	10	10	ppm	None	Erosion from natural deposits; Runoff from fertilizer, septic tanks, sewage
Selenium	0.0013	0.00100	<0.05	0.05	ppm	None	Erosion from natural deposits and drilling waste

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

Item	Limit (Treatment Technique)	Level Detected	Violation	Definition
Highest Single Measurement	1 NTU	0.42 NTU	None	Soil Runoff
Lowest Monthly % Meeting Limit	0.3 NTU	100%	None	Soil Runoff

Synthetic Organic Contaminants (pesticides and herbicides) Collected 03/02/2015

Contaminant	Highest Level Detected	Detection Limit	MCLG	MCL	Units	Violation	Definition
Alachlor	<0.10	0.10	0	2	ppb	None	Soil Runoff--Herbicide
Atrazine	0.11	0 – 0.11	3	3	ppb	None	Soil Runoff--Herbicide
Lindane	<0.02	0.02	200	200	ppb	None	Soil Runoff--Insecticide

Radioactive Contaminants (pCi / L: picocuries per liter—a measure of radioactivity. Tests are performed in 5 year cycles unless MCLs are exceeded)

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Definition
Beta/photon emitters	02/17/2011	4.9	4.9 – 4.9	0	50	pCi/L	N	Decay of natural and manmade deposits
Combined Radium 226/228	02/17/2011	<1.0	1— 1	0	5	pCi/L	N	Erosion from natural deposits

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.

No associated adverse health effects.

Constituent	Collection Date	Level Detected	Secondary Limit	Unit	Violation	Source of Constituent
Bicarbonate	03/02/15	85.9	None	ppm	N	Corrosion of carbonate rock such as, limestone
Chloride	03/02/15	26.6	300	ppm	N	Naturally occurring element used in water purification
Hardness as Ca/Mg	03/02/15	107	None	ppm	N	Naturally occurring calcium and magnesium
pH	03/02/15	7.89	> 7.0	Units	N	Measure of corrosivity of water
Sodium	03/02/15	24.8	None	ppm	N	Erosion of natural deposits; byproduct of oil field activity
Sulfate	03/02/15	30.2	300	ppm	N	Naturally occurring; common industrial byproduct; byproduct of oil field activity
Total Alkalinity as $CaCO_3$	03/02/15	99	None	ppm	N	Naturally occurring soluble mineral salts
Total Dissolved Solids	03/02/15	190	1000	ppm	N	Total dissolved mineral constituents in water

LEAD & COPPER

FACTs About Lead and Copper in Drinking Water

Summary of the United States Environmental Protection Agency's Lead and Copper Rule

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 facet is only used in the morning, run the facet 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.

Aesthetic Issues In 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 Distribution System

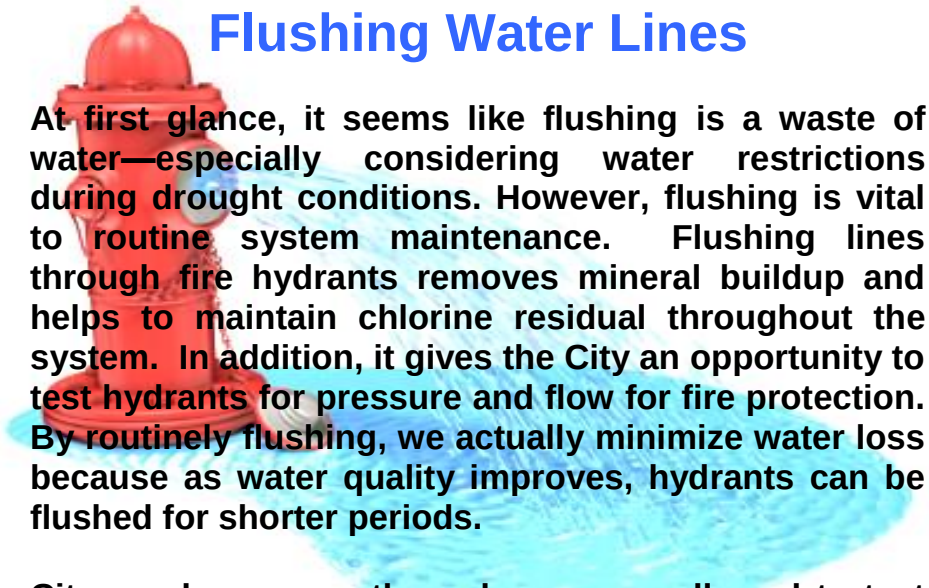
The potable water distribution system for the City of Azle consists of the Azle Water Treatment Plant; 96 miles of pipe through which potable water is transferred to businesses and residences; and, two elevated storage tanks. In all, the City maintains nearly 4 million gallons of water in storage to 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. So, 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 97 PSI and a minimum of 82 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.

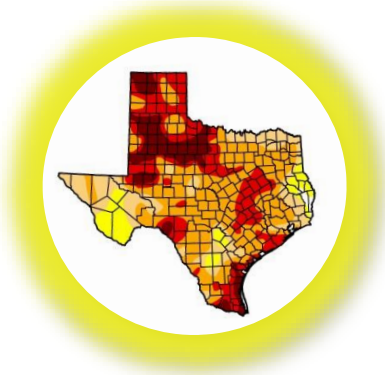
Water Loss Information

In the water loss audit submitted to the Texas Water Development Board for the time period of Jan-Dec 2015, our system lost an estimated 17,429,421 gallons of water. This amount equates to 3.41% 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.

Water Conservation

Although mandatory Stage 1 watering restrictions (initiated in June 2013) were terminated in May 2015, it is still important to remain mindful of the critical need to protect our most precious resource. The rainfall we received earlier this year that replenished our lakes and reservoirs did help with the drought that we've experienced over the past years, 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
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:
http://www.tceq.state.tx.us/permitting/water_rights/contingency.html



Current drought condition information may be found at www.tceq.state.tx.us

Water Conservation Websites for Helpful Tips and Guidance

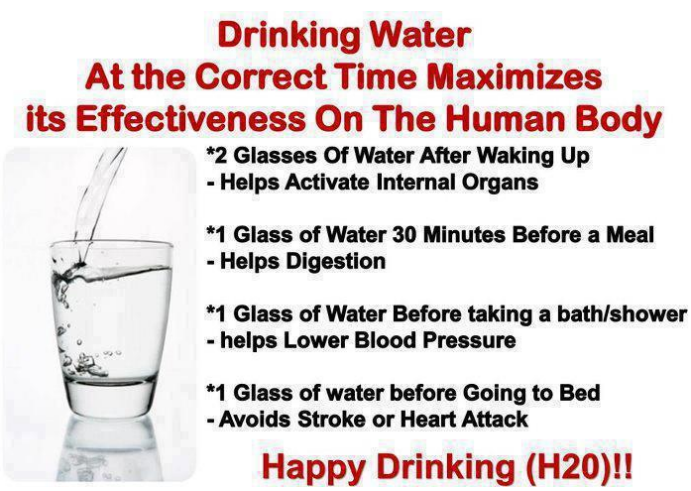
https://www.facebook.com/TxLawnWhisperer

http://www.trwd.com

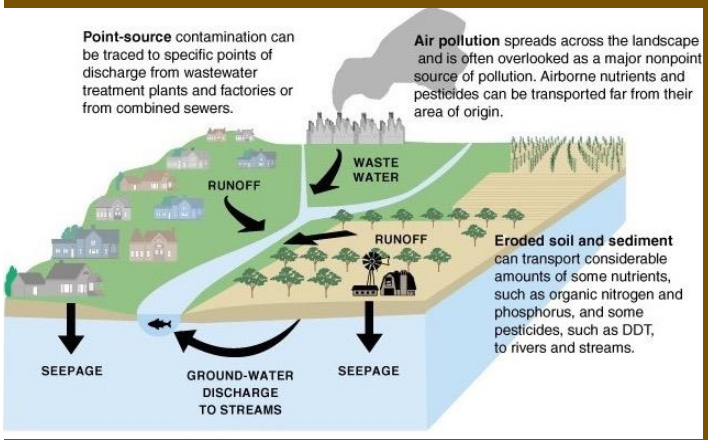
http://www.savetarrantwater.com/default.aspx

http://www.twca.org

http://texaslivingwaters.org



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 may be dropped off for recycling. It is located at 470 Denver Trail.