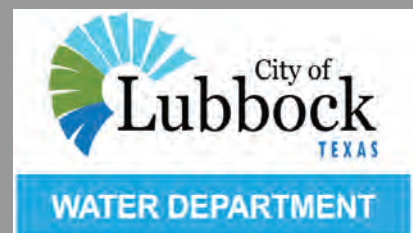




City of
Lubbock
2017 WATER
Quality Report



Water Conservation & Education



Conservation Matters

Fresh water is a natural resource. Our goal is to be good stewards of our water supply. In the summer, over half of the water used in Lubbock is for outdoor landscaping. Consider some of the water conservation tips below and determine what you can do to help us conserve. Some tips include installing WaterWise plants, using mulch, and being vigilant about irrigation system maintenance. Inside your home 46% of water usage is in the bathroom. By implementing these tips, you can save water and keep your home and yard looking beautiful.

For more tips on indoor and outdoor conservation, visit www.mylubbock.us/water

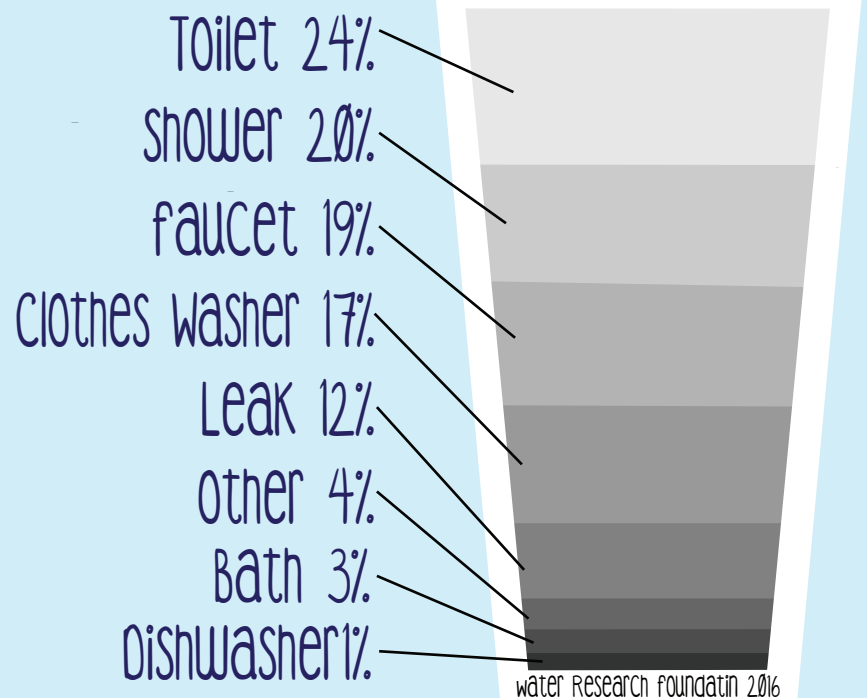
Education

An important part of our mission and commitment to sustainability involves outreach and educational opportunities to the community. Each year our education team visits local K-12 schools to educate young people about conservation, water and wastewater treatment, careers in the water industry, as well as recycling, landfills, and solid waste topics.

Our program provides an opportunity for young people to participate in engaging, hands-on activities that creatively explore the science of water and the complex issues surrounding it's management and stewardship.

Whether our children grow up and live in the Lubbock area or in other areas, their understanding of water issues will be a great assets for them.

To inquire about a lesson, presentation or to schedule for an educator to come to your classroom or event, contact watereducation@mylubbock.us



Water Loss

The City's 2017 water loss audit submitted to the Texas Water Development Board indicates that our system lost an estimated 990,043,677 gallons of water out of the 11,974,410,000 gallons that was delivered. This loss represents 8.2% of our total water use and a reduction of usage. If you have any questions about the water loss audit please call (806) 775-2616.

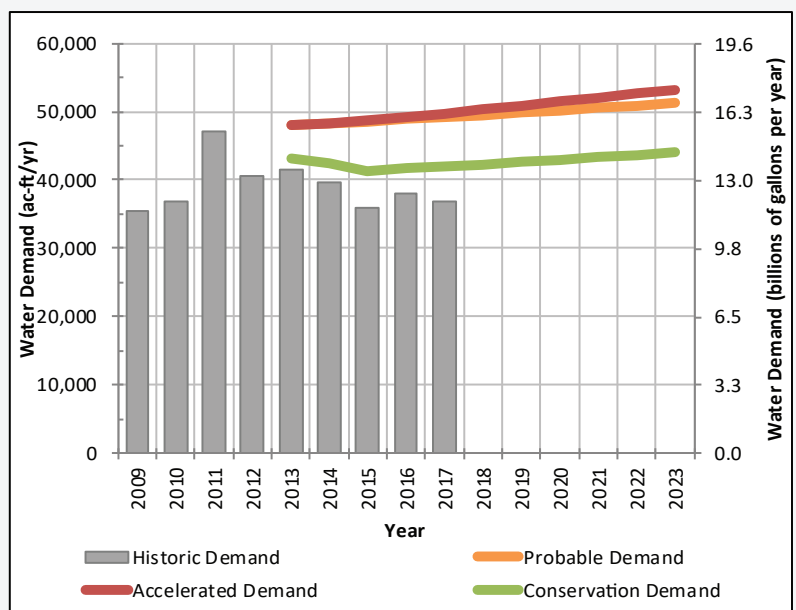
Strategic Water Planning

The 2013 Strategic Water Supply Plan (SWSP) created a “road map” for the City to use in developing and implementing water supply strategies over the next 100-year planning horizon. Even though the planning process is continuous, the City updates its Strategic Water Supply periodically. The 2013 SWSP is available online at:

www.mylubbock.us/strategicwatersupplyplan

The 2013 SWSP estimated that Lubbock would use between 13.7 to 16.0 billion gallons of water in 2017. The City actually only used 11.77 billion gallons of water which is less than the water conservation demand estimates. Thanks to you, we are stretching our water supplies and making every drop count.

This chart depicts three possible water demand scenarios (red, orange, and green lines) for Lubbock over the next ten years. The scenarios differ by population growth rate and level of water conservation. The grey bars depicts our actual water demand through 2017. Notice that in 2017 we used less water than projected for conservation (green line).



SUSTAINABILITY

The key to minimizing risk is to diversify your portfolio or not to place all your “eggs into one basket”. Our goal is to create a blend of several types of water supplies including groundwater, surface water, conservation and reuse water.

Conservation is a long-term effort

The City of Lubbock adopted a revised Water Use Management Plan ordinance on January 12, 2017. As a result, the City is no longer in drought stage restrictions. However, our revised ordinance includes continuing our efforts to restrict the number of days we irrigate each week.

October 1- March 31

- Irrigate less than 1 inch per zone per week
- Irrigate any time of day on assigned days

April 1– September 30

- Irrigate less than 1.5 inches per zone per week
- Irrigate only between the hours of midnight to 10 a.m. and from 6 p.m. to midnight on assigned days



Current Water Conservation Measures

- Irrigation Restrictions
- Irrigate only when temperatures are above 35°F
 - Irrigate without runoff
 - Do not irrigate during precipitation events
 - Hand watering allowed any time of day

Irrigation Schedule- (based on last digit of the house number)

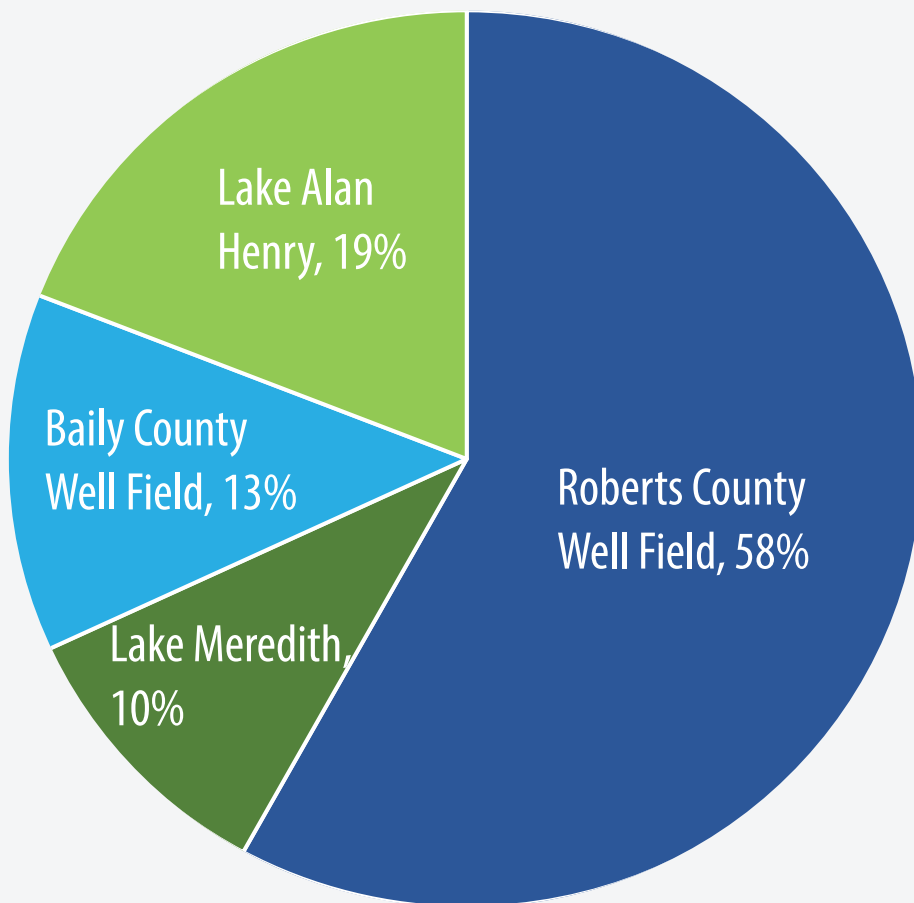
| | |
|----------------------|---------|
| Monday & Thursday | 0,3,4,9 |
| Tuesday & Friday | 1,5,6 |
| Wednesday & Saturday | 2,7,8 |

City of Lubbock's Water Supply 2017

Lubbock has a diversified water supply. Groundwater from the Ogallala Aquifer is supplied from the Roberts County Well Field (RCWF) and the Bailey County Well Field (BCWF) and accounts for 71% of Lubbock's water usage. Surface water is supplied by Lake Alan Henry (LAH) and Lake Meredith (LM) and accounts for 29% of water usage.

Lake Alan Henry (LAH)

The City owns LAH, located approximately 65 miles southeast of Lubbock. The completion of LAH water supply infrastructure facility, in August 2012, was a significant water supply milestone. LAH is 80% full as of April 2018. In 2017, the water customers of Lubbock used approximately 2.24 billion gallons of water from LAH.



Roberts County Well Field (RCWF)

The Canadian River Municipal Water Authority (CRMWA) manages the RCWF. RCWF is located approximately 150 miles to the northeast of Lubbock. In 2017, the water customers of Lubbock used approximately 6.98 billion gallons of water from this well field.

Lake Meredith (LM)

The CRMWA manages Lake Meredith. LM is approximately 160 miles north of Lubbock, and is 40% full as of April 2018. In 2017, water customers used approximately 1.18 billion gallons of water from LM.

Bailey County Well Field (BCWF)

The City has owned BCWF since the 1950s. The City has over 80,000 acres of water rights holdings in the BCWF. Currently, there are 175 active wells, and the average well production capacity is 200 gallons per minute. BCWF is located approximately 75 miles northwest of Lubbock. In 2017, the water customers of Lubbock used approximately 1.57 billion gallons of water from this well field.

2017 Water Quality Data

| SUBSTANCE | MONITORING DATE* | MCL | HIGHEST LEVEL DETECTED | MCLG | RANGE | SOURCES OF CONTAMINATION | VIOLATION |
|--|------------------|--|---|---------------|------------------|---|-----------|
| SUBSTANCES REGULATED AT THE TREATMENT PLANT | | | | | | | |
| BETA/PHOTON EMITTERS | 2017 | 50 pCi/L* | 8.1 pCi/L | 0 | 4.3 - 8.1 pCi/L | Decay of natural and man-made deposits | NO |
| ALPHA EMITTERS | 2017 | 15 pCi/L | 7 pCi/L | 0 | 2 - 7 pCi/L | Erosion of natural deposits | NO |
| URANIUM | 2017 | 30 ppb | 4.9 ppb | 0 | 3.5 - 4.9 ppb | Erosion of natural deposits | NO |
| ARSENIC | 2016 -2017 | 10 ppb | 4 ppb | 0 | 1.1 - 4 ppb | Erosion of natural deposits; runoff from orchards | NO |
| BARIUM | 2016 -2017 | 2 ppm | 0.21 ppm | 2 ppm | 0.092 - 0.21 ppm | Erosion of natural deposits | NO |
| CHROMIUM | 2016 -2017 | 100 ppb | 4.1 ppb | 100 ppb | 0 - 4.1 ppb | Erosion of natural deposits | NO |
| SELENIUM | 2016 -2017 | 50 ppb | 2.7 ppb | 50 ppb | 0 - 2.7 ppb | Erosion of natural deposits | NO |
| CYANIDE | 2017 | 200 ppb | 163 ppb | 200 ppb | 0 - 163 ppb | Discharge from steel/metal, plastic, and fertilizer factories | NO |
| FLUORIDE | 2017 | 4 ppm | 1.46 ppm | 4 ppm | 0.71 - 1.46 ppm | Erosion of natural deposits | NO |
| NITRATE | 2017 | 10 ppm | 1.52 ppm | 10 ppm | 0.11 - 1.52 ppm | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion | NO |
| TURBIDITY | 2017 | TT = 5 NTU | 0.28 | 0 | 0.03 - 0.28 NTU | Soil runoff | NO |
| | | TT = % of samples <0.3 NTU | 100% | | | | |
| TOTAL ORGANIC CARBON | 2017 | TT | 1.57 ppm | TT | 0.16 - 1.57 ppm | Naturally present in environment | NO |
| CHLORAMINES | 2017 | MRDL=4.0 ppm | 2.6 | MRDLG=4.0 ppm | 0.5 - 4.1 ppm | Disinfectant used to control microbes | NO |
| CHLORITE | 2017 | 1 ppm | 0.586 ppm | 0.8 ppm | 0 - 0.586 ppm | By- product of drinking water disinfection | NO |
| REGULATED IN THE DISTRIBUTION SYSTEM | | | | | | | |
| TOTAL TRIHALOMETHANES | 2017 | 80 ppb | 32.3 ppb^ | N/A | 1.22 - 42.9 ppb | By- product of drinking water chlorination | NO |
| HALOACETIC ACIDS (5) | 2012 | 60 ppb | 12.8 ppb^ | N/A | 0 - 16.4 ppb | By- product of drinking water chlorination | NO |
| TOTAL COLIFORM | 2017 | Presence of coliform bacteria in 5% or more of the monthly samples | 2.4% | 0 | N/A | Naturally present in the environment | NO |
| <i>E. COLI</i> | 2017 | | 0 | 0 | N/A | Naturally present in the environment | NO |
| REGULATED AT THE CUSTOMERS' TAP | | | | | | | |
| LEAD (90th Percentile) | 2015 | 15 ppb AL | 1.5 ppb (2015) All sites were below the AL of 15 ppb | 0 - 8.6 ppb | | Erosion of natural deposits; corrosion of household plumbing systems | NO |
| COPPER (90th Percentile) | 2015 | 1.3 ppm AL | 0.11 ppm (2015) All sites were below the AL of 1.3 ppm | 0 - 0.25 ppm | | Erosion of natural deposits; corrosion of household plumbing systems | NO |
| ADDITIONAL MONITORING | | | | | | | |
| ALUMINUM | 2016 - 2017 | 0.05- 0.2 ppm^^ | 0.08 ppm | N/A | N/A | Water Treatment Chemical | |
| CHLORIDE | 2017 | 300 ppm ^^ | 291 ppm | N/A | N/A | Naturally occurring | |
| SULFATE | 2017 | 300 ppm ^^ | 125 ppm | N/A | N/A | Naturally occurring | |
| TOTAL DISSOLVED SOLIDS | 2017 | 1000 ppm^^ | 777 ppm | N/A | N/A | Naturally occurring | |
| AMMONIA | 2017 | Not Regulated | 0.92 ppm | N/A | N/A | Water Treatment Chemical | |
| CALCIUM | 2016 - 2017 | Not Regulated | 54 ppm | N/A | N/A | Naturally occurring | |
| MAGNESIUM | 2016 - 2017 | Not Regulated | 26 ppm | N/A | N/A | Naturally occurring | |
| POTASSIUM | 2016 - 2017 | Not Regulated | 5.5 ppm | N/A | N/A | Naturally occurring | |
| SODIUM | 2016 - 2017 | Not Regulated | 248 ppm | N/A | N/A | Naturally occurring | |
| NICKEL | 2016 - 2017 | Not Regulated | 0.004 ppm | N/A | N/A | Erosion of natural deposits | |
| ZINC | 2016 - 2017 | 5 ppm^^ | 0.003 ppm | N/A | N/A | Naturally occurring | |
| HARDNESS | 2016 - 2017 | Not Regulated | 243 ppm | N/A | N/A | Naturally occurring | |
| CONDUCTANCE | 2017 | Not Regulated | 1490 micromhos/cm | N/A | N/A | Naturally occurring | |
| TOTAL ALKALINITY | 2017 | Not Regulated | 177 ppm | N/A | N/A | Naturally occurring | |

ALL DATA IN THIS TABLE WERE COLLECTED IN 2017 UNLESS OTHERWISE DESIGNATED IN PARENTHESES.

The state allows us to monitor for some substances less than once per year because the concentrations of these substances do not change frequently. Some of our data, though representative, are more than one year old.

*The MCL for beta/photon emitters is 4 mrem/year. The USEPA considers 50 pCi/L to be the level of concern for beta/photon emitters.

**Running Annual Average

^ Highest Locational Running Annual Average

^^ Secondary Constituent Levels set by the Texas Commission of Environmental Quality.

Water Quality Data Table Information

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 were found.

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 Escherichia coli (E. coli) maximum contaminant level (MCL) violation has occurred and/or why total coliform bacteria were found on multiple occasions.

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 Contaminant Level (MCL)- The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to maximum contaminant level goals as feasible using the best available treatment technology.

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.

MFL- Million Fibers per Liter, measure of asbestos

mrem/year- Millirems per year, a measure of radiation absorbed by the body

NTU- Nephelometric Turbidity Units, a measurement of turbidity

pCi/L- Picocuries per Liter, a measurement of radioactivity

ppb- Parts per billion or micrograms per liter

ppm- Parts per million or milligrams per liter

ppt- Parts per trillion or nanograms per liter

ppq- Parts per quadrillion or picograms per liter

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

Action Level (AL)- The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Water Quality Contact Information

Safe Drinking Water Hotline: (800) 426-4791

City of Lubbock Water Treatment Lab

(806) -775-2614

Weekdays 7:30 a.m. to 4:30 p.m.

City of Lubbock Water Department

www.mylubbock.us/water

watereducation@mylubbock.us

Water Quality Contact Information

Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (806) 775-3596.

2017 Water Quality Explanation

Lead

While elevated levels of lead have not been detected in Lubbock's water distribution system, high levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at the homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. This water supply 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 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 <http://www.epa.gov.safewater/lead>.

Arsenic

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Nitrate

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

Special Information for People with Immune System Deficiencies

Certain people may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly or immuno-compromised 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 for infections. These individuals should seek advice about drinking water from their 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 1-800-426-4791.

Where to Find Additional Info

The Texas Commission on Environmental Quality publishes a Source Water Susceptibility Assessment for drinking water sources. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus our protection strategies. This source water assessment information is available on Texas Drinking Water Watch at <http://www.tceq.state.tx.us/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.