WHY PROVIDE A
Water Quality Report?

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or 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 stormwater 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 stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

TCEQ completed an assessment of our source water, and the results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detection of these contaminants will be found in this report. If we receive or purchase water from another system, their susceptibility is not included in this assessment. For more information on source water assessments and protection efforts of our system, please contact Jennifer Flood at (817) 598-4275.

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CITY OF WEATHERFORD

WATER QUALITY REPORT

2011

Este eportahe contiene informacion importante sobre la calidad del agua proporciando por la ciudad de Weatherford. Si no puede leer ingles, por favor encuentre a una persona para traducirselo.

CITY OF WEATHERFORD

PWS ID# 1840005

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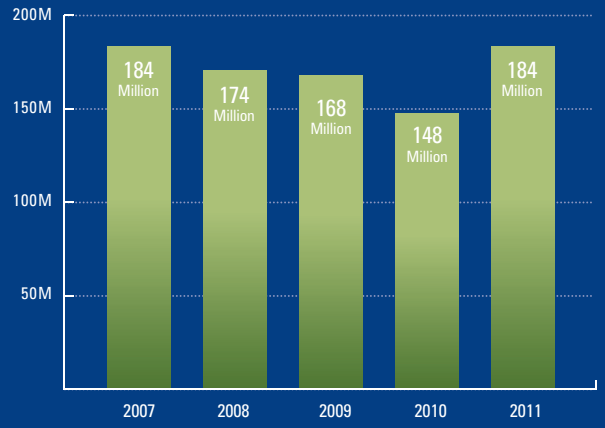
Taking care of our precious resources today helps ensure a livable city for the future.

The City of Weatherford continues to experience a steady growth in both residential and industrial development. Common sense tells us that our domestic water production should increase as well, yet we have seen our usage values remain fairly consistent over the last five years.

City of Weatherford 2007-2011



Some contributing factors for this include:

- *Water use efficiency goals, such as leak detection, repairs, and other conservation measures.*
- *Increased public awareness of water being a valuable and finite resource.*

The current design capacity of the plant is 14 million gallons per day (MGD). Daily peak flows run between 3.2 MGD in the winter to more than 6.9 MGD during the summer. In 2011, the City of Weatherford treated more than 1.6 billion gallons of water.

Why fixing leaks around your home is important

Water conservation measures are an important first step in protecting and conserving our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill.

A single conservation measure that can have the biggest impact is to fix all leaks. Even the smallest leak can have a big effect on your water usage. Here are some leak facts that may surprise you:

- *A 1/8 inch hole in a metal pipe, at 40 psi, leaks 2,500 gallons of water in 24 hours.*
- *A leak the size of a pinhead can waste 360,000 gallons per year, enough to fill 12,000 bathtubs to the overflow mark.*
- *A leaking toilet can use 90,000 gallons of water in 30 days.*
- *A dripping faucet or hose bib can lose up to 180 gallons a month or 2,160 gallons per year.*
- *About one in every 20 pools has a leak.*
- *About one in every 318 homes or buildings has a leak.*
- *A typical toilet leak at today's rate can add $500 to a single water bill.*
- *One trip through a car wash uses 150 gallons of drinking water.*
- *Using a broom instead of a hose to clean a sidewalk saves 150 gallons of water.*

Source: American Leak Detection and Water Online.

The City of Weatherford supports responsible water usage and encourages all customers to use water wisely. The City of Weatherford provides procedures for voluntary and mandatory actions related to the City's water supply system through the Drought Contingency Plan.

Information on other ways that you can help conserve water can be found at http://water.epa.gov/action/protect/index.cfm

MESSAGE FROM THE EPA

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 (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. The City of Weatherford 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 drinking 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.

The U.S. EPA Office of Water (www.epa.gov/ow) and the Centers for Disease Control and Prevention (www.cdc.gov) web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health.

A source water assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality. 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. For more information about your water, please visit the Source Water Assessment Viewer at www.tceq.texas.gov/gis/swaview.

For further details about sources and source water assessments, please visit http://dww.tceq.texas.gov/DWW/

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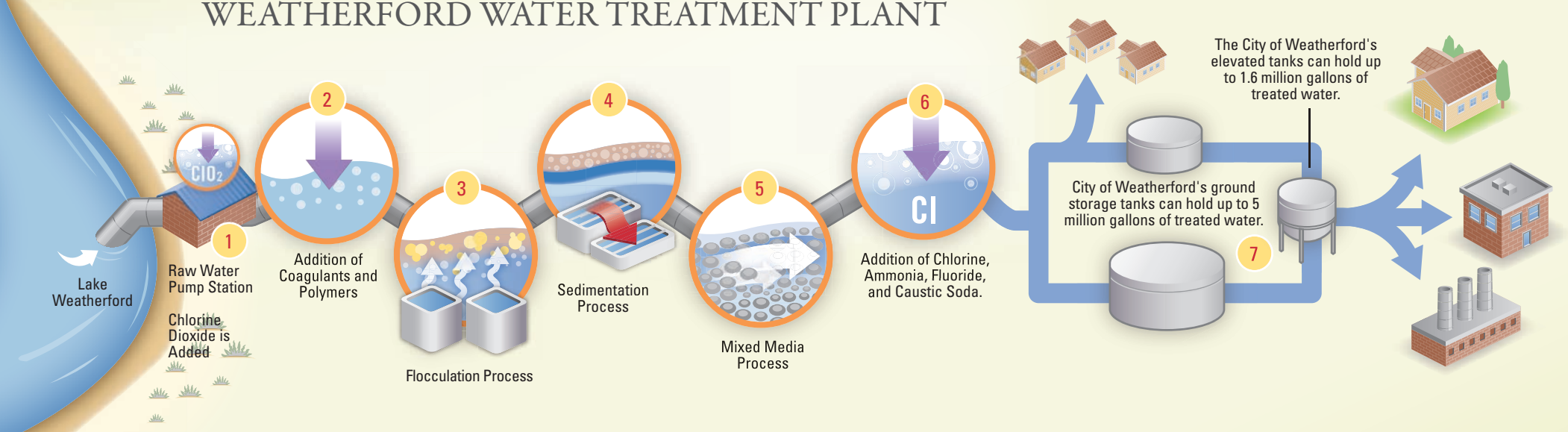
The City of Weatherford Works Hard to Provide High Quality Water For You!!

The City of Weatherford Utility System can assure you that our priority is to supply superior-quality drinking water to our customers. This report is a summary of the quality of water we provide our customers. The analysis was made by using data from the most recent tests required by the Texas Commission on Environmental Quality (TCEQ). We hope this information helps you to become more knowledgeable about your drinking water.

Where does our water come from?

Our drinking water is obtained from two water sources. Our primary water source comes from Lake Weatherford. Lake Benbrook serves as a secondary water supply. The Water Purification Plant is responsible for safely treating and delivering an adequate supply of water to our customers. Our water has received a "Superior" rating from TCEQ and exceeds all state and federal standards.

WEATHERFORD WATER TREATMENT PLANT



1. Water is pumped from the Lake Weatherford to the water treatment plant. As the water enters the plant, chlorine dioxide is added to oxidize the organics in the raw water. This helps to control taste and odors, and to enhance the disinfection process.

2. Our water treatment plant uses two forms of water treatment. Our membrane system and the trident system. Our membrane system uses small fibers to filter out particles. After filtration, this water goes to step #6 for final disinfection. Our trident system uses coagulants and polymers for treatment.

   Coagulants and polymers are added to attract small particles together to form larger particles (floc), which are more readily removed during sedimentation and filtration processes. Dosages of the coagulant and polymer are varied according to the purity of the untreated water.

3. The coagulant and polymer continues to mix in the water and create floc as the water makes its way through the flocculation process and into the sedimentation process.

4. The larger floc particles, and other existing solids, settle out as the water slowly makes its way through the sedimentation process on its way to the mixed media process.

5. The water then flows through mixed media process (anthracite, sand, and garnet), which filter out the remaining unsettled particulate matter.

6. Filtered water enters the clear well tank which provides contact time for the post-chlorinated water. This allows for disinfection of any bacterial contamination in the water and provides a chlorine residual for the distribution system.

   Fluoride, ammonia, caustic soda, and chlorine are added in accordance with the Texas Commission on Environmental Quality (TCEQ). Ammonia is added to the water to create chloromines. Chloromines are created when ammonia and chlorine combine in a chemical reaction. Chloromines are used as the primary disinfectant in our water system.

   After the clear well tank, the water is of excellent quality and is ready for distribution and use.

7. The water is then pumped to the city's distribution and storage system. The water is distributed throughout the City of Weatherford for residential, business, and industrial use. The entire process is continually monitored and tested in order to ensure that the process and the water quality meets or exceeds state and federal regulations.

DURING THE PAST YEAR we have taken water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

REGULATED SUBSTANCES

Substance	Year Tested	Amount Detected	Range of Levels Detected	MCLG	MCL	Violation	Typical Source
Arsenic (ppb)	2011	1.4	1.4-1.4	0	10	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics; Production wastes.
Barium (ppm)	2011	0.06	0.06-0.06	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium (ppb)	2011	0.275	0.275-0.275	100	100	No	Discharge from steel and pulp mills. Erosion of natural deposits.
Fluoride (ppm)	2011	0.2	0.2-0.2	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Haloacetic Acids [HAAs] (ppb)	2011	21	15.1-20.4	NA	60	No	By-product of drinking water disinfection.
Nitrate (ppm)	2011	0.1	0.1-0.1	10	10	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Selenium (ppb)	2011	1.75	1.75-1.75	50	50	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Thallium (ppb)	2011	0.006	0.006-0.006	0.5	2	No	Discharge from electronics, glass, and leaching from ore processing sites; drug factories.
Total Trihalomethanes [TTHMs] (ppb)	2011	49	36.8-41.7	NA	80	No	By-product of drinking water disinfection.
Total Organic[1] Carbon (ppm)	2011	5.38	3.43-5.38	TT	NA	No	Naturally present in the environment.

REGULATED SUBSTANCES

Substance	Year Tested	Highest Single Measurement	Lowest Monthly % of Samples </- 0.3 NTU	MCLG	MCL	Violation	Typical Source
Turbidity[2] (NTU)	2011	0.62	98.87%	NA	TT	No	Soil runoff.

RADIOACTIVE CONTAMINANTS

Substance	Year Tested	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Violation	Typical Sources
Radium 226/228 (pCi/L)	2011	1.0	1.0-1.0	0	5	No	Erosion of natural deposits.

1. Total Organic Carbon (TOC) has no health effects. The disinfectant in the water can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include Trihalomethanes (THMs) and Haloacetic Acids (HAAs), which are in this report.
2. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms, including bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

COPPER AND LEAD CONTAMINANTS

Substance	Year Tested	90th Percentile	# of sites exceeding AL	MCLG	AL	Typical Source
Copper (ppm)	2010	0.163	0	1.3	1.3	Erosion of natural deposits; leaching from wood preservatives. Corrosion of household plumbing systems.
Lead (ppb)	2010	2.37	0	0	15	

90th percentile value: 90% of the samples were at or below this value. EPA considers the 90th percentile value the same as an "average" value for other contaminants. Lead and copper are regulated by a treatment technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps.

INITIAL DISTRIBUTION SYSTEM EVALUATION RESULTS

We are required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

Disinfectant	Year Tested	Amount Detected	Range of Levels Detected	Typical Source
Haloacetic Acids [HAAs] (ppb)	2008	19.38	17.10-20.80	By-Product of drinking water disinfection.
Total Trihalomethanes [TTHMs] (ppb)	2008	39.76	36.7-42.40	

UNREGULATED SUBSTANCES

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.

Substance	Year Tested	Amount Detected	Range of Levels Detected	MCL	MCLG	Typical Source
Bromodichloromethane (ppb)	2011	10.95	8.0-13.2	0	0	By-Product of Drinking Water Disinfection. Included in TTHM measurement.
Bromoform (ppb)	2011	4.59	4.59-7.3	0	0	
Chloroform (ppb)	2011	6.8	3.8-6.8	0	70	
Dibromochloromethane (ppb)	2011	13.89	13.89-18.3	0	60	

TABLE DEFINITIONS

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

MCLG (Maximum Contaminant Level Goal): 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.

MCL (Maximum Contaminant Level): 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.

NA: Not applicable

ND: Not detected

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

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

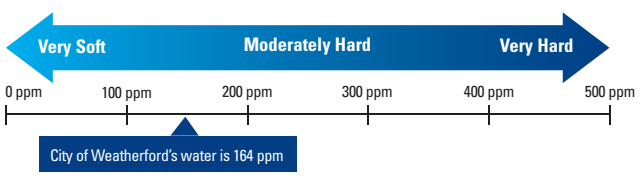
ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water.

pCi/L (picocuries per liter): A measure of radioactivity

INFORMATION ABOUT SECONDARY CONTAMINANTS

Many constituents (such as calcium, sodium, or iron) which 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 causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.



IS MY WATER HARD?

If substantial amounts of calcium or magnesium, both nontoxic minerals, are present in drinking water, the water is said to be hard. Hard water does not dissolve soap readily, so making lather for washing and cleaning is difficult. Conversely, water containing little calcium or magnesium is called soft water.

The Weatherford Municipal Utility Board, Administrators, and Water Treatment Professionals will be available for questions regarding water quality concerns. Please visit our website at www.weatherfordtx.gov or call us at 817-598-4275 for more information and/or to confirm meeting dates and times. During the meeting on July 26th, the Utility Board, Administrators, and Water Treatment Professionals will be available to answer questions regarding this report and any other water quality concerns.

Questions? For more information, please contact Ms. Jennifer Flood at (817) 598-4275

CITY OF WEATHERFORD

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