



Reporting Year 2012  
**WATER QUALITY**  
 Annual REPORT

**There When You Need Us**

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2012. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

**Where Does My Water Come From?**

The City of Beaumont has two sources of water: (1) well water is pumped from the Chicot Aquifer at three different well sites located in Hardin County and (2) surface water from the Neches River, with three separate intakes located at various spots upriver from Beaumont. Well water receives chlorination before it is pumped to the city. Surface water receives more complex treatment, including filtration and chlorination. The City of Beaumont checks and analyzes both sources of water daily to ensure compliance with all federal and state requirements. The water plant is manned 24 hours a day, 7 days a week, to give you the best quality water possible.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. Sometimes the city has water-line breaks. When they occur, the color comes from iron and mineral deposits inside the pipe that become dislodged. After the water line is repaired, the water will clear and you may run your faucet to clear the discolored water in your home's pipes. To report a water-line break, please call Water & Sewer Maintenance Division at 860-3221. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the 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 (800) 426-4791.

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al teléfono (409) 866-0026.  
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**Important Health Information**

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at (800) 426-4791.

**Public Meetings**

The Water Utilities Department is part of the city government and follows not only federal and state regulations but also ordinances established by City Council. The City Council meets each Tuesday at City Hall, 801 Main Street, Beaumont, Texas 77704, at 1:30 p.m., or you may contact the council members at 880-3770. You are invited to participate in our public forum and to voice your concerns about your drinking water.

**Congratulations Barry!**

We are proud to boast about our Water Treatment Plant Superintendent, Barry W. Miller, who received the Operator of the Year Award for 2012 from the Texas Water Utilities Association, T.W.U.A. The T.W.U.A. is an organization that provides training to utility operators and technical publications. Barry has been working with the City of Beaumont for 28 years and holds a Class A Water Operator License.



**QUESTIONS?**

For questions about the information in this report, please contact Karin K. Warren, Water Quality Control Manager, at (409) 866-0026. For more information on taste, odor, or color of drinking water, please contact our business office. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. Contaminants can be naturally occurring or may be the result of oil and gas production and mining activities. which can be naturally occurring or may be the result of runoff, and septic systems; **Radioactive Contaminants**, which may also come from gas stations, urban stormwater runoff, and septic systems; **Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which may come from a variety of sources, such as agriculture, mining, or farming; **Pesticides and Herbicides**, which may come from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, or result from urban stormwater runoff, industrial or as salts and metals, which can be naturally occurring or operations, or wildlife; **Inorganic Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; **Microbial Contaminants**, such as source water include: **Microbial Contaminants**, such as from human activity. Substances that may be present in and substances resulting from the presence of animals or occurring minerals, in some cases, radioactive material, the land or through the ground, it can acquire naturally. 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 water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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 urban stormwater runoff, industrial or volatile organic chemicals, which are by-products of industrial processes and petroleum production and which may also come from gas stations, urban stormwater runoff, and septic systems; **Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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, which must provide the same protection for public health. Drinking water, including 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.

**Substances That Could Be in Water**



**Lead in Home Plumbing**

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. 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Sampling Results

During the past year, we have taken hundreds of 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. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES		UNREGULATED SUBSTANCES	
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	SITES ABOVE AL/ TOTAL SITES
Barium (ppm)	2012	0.0528	2
Chlorine (ppm)	2012	0.01-4.10	[4]
Haloacetic Acids [HAA]-Stage 2 (ppb)	2012	3.9-35.1	NA
Nitrate (ppm)	2012	0.09-0.09	10
TTTHMs [Total Trihalomethanes]-Stage 2 (ppb)	2012	15.6-49.1	NA
Total Coliform Bacteria (% positive samples)	2012	0.78	0
Total Organic Carbon (ppm)	2012	2.52-6.68	NA
Turbidity (NTU)	2012	0.54	NA
Turbidity (Lowest monthly percent of samples meeting limit)	2012	NA	samples < 0.3 NTU
Year	2012	Amount Detected	MCL [MRDL]
Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	No	0.0528	2
Water additive used to control microbes	No	0.01-4.10	[4]
By-product of drinking water disinfection	No	3.9-35.1	NA
Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits	No	0.09-0.09	10
By-product of drinking water disinfection	No	15.6-49.1	NA
Naturally present in the environment	No	0.78	0
Naturally present in the environment	No	2.52-6.68	NA
Soil runoff	No	0.03-0.54	NA
Soil runoff	No	0.54	NA

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED (90TH+TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2012	0.1487	0/49	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2012	1.3	0/49	No	Corrosion of household plumbing systems; Erosion of natural deposits

## SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
Aluminum (ppb)	2012	200	NA	118	118-118	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2012	250	NA	14	14-14	No	Runoff/leaching from natural deposits
Manganese (ppm)	2012	50	NA	0.13	0.13-0.13	No	Leaching from natural deposits
pH (Units)	2012	6.5-8.5	NA	8.2	8.2-8.2	No	Naturally occurring
Sulfate (ppm)	2012	250	NA	85	85-85	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2012	500	NA	181	181-181	No	Runoff/leaching from natural deposits

## UNREGULATED SUBSTANCES?

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2012	9.2	4.7-12.5	Disinfectant by-product
Bromoform (ppb)	2012	1.1	1.0-2.3	Disinfectant by-product
Chlorodibromomethane (ppb)	2012	1.0	3.4-7.8	Disinfectant by-product
Chloroform (ppb)	2012	19.9	3.3-40.7	Disinfectant by-product
Dibromochloromethane (ppb)	2012	3.4	1.0-7.8	Disinfectant by-product

Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

## Source Water Assessment

A Source Water Assessment Plan (SWAP) 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. The information contained in the assessment allows us to focus source water protection strategies. Some of this source water assessment information is available on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

## What's a Cross-connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the drinking water system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage). Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

## Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and improved taste.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.



The flushing program includes setting automatic flushing devices to help conserve water while maintaining high water quality within the distribution system. Jamatu Sokata programs and maintains the devices to ensure adequate flushing is performed.

## Definitions

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

**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. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

**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.

**MRDL (Maximum Residual Disinfectant Level):** 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.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

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