

BWA
DRINKING WATER QUALITY REPORT
YEAR 2006 DATA
(817) 249-1250

BENBROOK WATER IS SAFE

Benbrook Water Authority (BWA) is committed to providing residents with a safe and reliable supply of high quality drinking water. As you read this report, you will learn that the water delivered to your tap meets or exceeds all state and federal water quality standards. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages.

When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices. 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 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.

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 concerns. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water. The Tarrant Regional Water District and BWSA continually study the best way to remove these tastes and odors and treat the water.

****SPECIAL NOTICE****
For the Elderly, Infants, Cancer
Patients, People with HIV/Aids and
Other Immune Problems

The Texas Commission on Environmental Quality (TCEQ) requires the following statement be printed in all annual water quality reports.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791)

En español

Este reporte incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre este reporte en español, llame al TEL. 817-249-1250 y alguien hablará con usted en español.

Public Participation Opportunities

Benbrook Water Authority is a water district created by the Texas Legislature in 1955. BWA is governed by a five-member elected Board of Directors, which meets regularly on the first and third Tuesday of each month. The meetings are held at the office of the Water Authority at 5:30 p.m. For more information about meetings and how to register as a speaker, contact the Authority's office at 817-249-1250.

Water Sources

The BWA obtains its drinking water from ground and surface water sources. It comes from the following Lake/River/Reservoir/Aquifer: Paluxy, Trinity, Clear Fork Trinity River, and Benbrook Lake. TCEQ completed an assessment of our source water and 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 at our system, please contact us.

About the Following Pages

The pages that follow list all of the federally regulated or monitored constituents which have been found in your drinking water. U.S. EPA requires water systems to test up to 97 constituents.

Understanding the Tables

The following list explains the terms used in the tables:

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 permissible level of a contaminant in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

MRDL (Maximum Residual Disinfectant Level)—The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal)—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 contamination.

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 which a water system must follow.

ABBREVIATIONS

NTU—Nephelometric Turbidity Units.

MFL—million fibers per liter (a measure of asbestos).

pCi/l—picocuries per liter (a measure of radioactivity).

ppm—parts per million, or milligrams per liter (mg/l).

ppb—parts per billion, or micrograms per liter (ug/l).

ppt—parts per trillion, or nanograms per liter.

ppq—parts per quadrillion, or picograms per liter.

Turbidity—a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

The water quality data table shows the results of our water quality analyses. Every regulated contaminant that we detected in the water, even in the minutest traces, is listed. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the usual sources of such contamination, and a key to unit of measurement.

Water Quality Data Table

Inorganic Contaminants

Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2002-2005	Barium	0.045	0.0004	0.069	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
2005-2006	Fluoride	0.22	0	0.8	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
2006	Nitrate	0.12	0.002	0.4	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
2002-2005	Combined Radium 226 & 228	0.44	0	2.4	5	0	pCi/L	Erosion of natural deposits
2002-2005	Gross beta emitters	2.82	0	7.6	50	0	pCi/L	Decay of natural and man-made deposits
2002-2005	Gross alpha	1.58	0	8.4	15	0	pCi/L	Erosion of natural deposits

Organic Contaminants

Year (Range)	Contaminant	Highest Average	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2003-2006	Di (2 ethylhexy) phthalate	0.28	0	6.06	6	0	ppb	Discharge from rubber and chemical factories

Maximum Residual Disinfectant Level

Systems must complete and submit disinfection data on the Surface Water Monthly Operations Report (SWMOR). On the CCR report, the system must provide disinfectant type, minimum, maximum and average levels.

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2006	Free C12	1.49	1.15	1.89	4.0	<4.0	ppm	Disinfectant used to control microbes

Disinfection Byproducts

Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2006	Total Haloacetic Acids	19.6	0	32	60	ppb	By-product of drinking water disinfection
2006	Total Trihalomethanes	57.9	0	77.3	80	ppb	By-product of drinking water disinfection

Unregulated Contaminants

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts.

There is no maximum contaminant level for these chemicals at the entry point to distribution.

Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2002-2006	Chloroform	1.38	0	15	ppb	Byproduct of drinking water disinfection
2002 – 2006	Bromoform	0.81	0	4.7	ppb	Byproduct of drinking water disinfection
2002 – 2006	Bromodichloromethane	2.12	0	17	ppb	Byproduct of drinking water disinfection
2002 – 2006	Dibromochloromethane	2.37	0	16	ppb	Byproduct of drinking water disinfection

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. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

• **Turbidity Data Not Furnished by TCEQ**

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2006	Turbidity	0.30	100.00	0.3	NTU	Soil Runoff

Lead and Copper

Year (Range)	Contaminant	The 90 th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Constituent
2004	Lead	3.1	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits
2004	Copper	0.164	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Total Organic Carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.

Year 2006	Treated TOC mg/l	Source TOC mg/l	% Removed (1-a/b)x100	Source Water Alkalinity mg/l	Required TOC Removal (%)	C/E
January	3.1	5.6	44.64	105	35	1.28
February	3.2	5.1	37.25	113	35	1.06
March	3.1	5.4	42.59	113	35	1.22
April	2.7	4.6	41.30	124	25	1.65
May	2.6	4.8	45.83	119	35	1.31
June	3.6	5.6	35.71	108	35	1.02
July	2.3	5.3	56.60	100	35	1.62
August	2.9	5.6	48.21	96	35	1.38
September	3.2	5.4	40.74	91	35	1.16
October	3.2	6	46.67	90	35	1.33
November	3.5	5.4	35.19	96	35	1.01
December	3.1	5.1	39.22	98	35	1.12
					Sum	15.16
					Average	1.26

Total Coliform – Reported monthly tests found no coliform bacteria.

Fecal Coliform – Reported monthly tests found no fecal coliform bacteria.

Secondary and Other Not Regulated Constituents

(No associated adverse health effects)

Year (Range)	Constituent	Average Level	Minimum Level	Maximum Level	Limit	Unit of Measure	Source of Constituent
2002-2005	Aluminum	0.003	0	0.039	50	ppm	Abundant naturally occurring element
2005 – 2006	Bicarbonate	309	102	472	NA	ppm	Corrosion of carbonate rocks such as limestone
2002-2005	Calcium	22.6	2	45.8	NA	ppm	Abundant naturally occurring element
2005-2006	Chloride	22	16	34	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
2002-2005	Copper	0.004	0	0.01	NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2002-2005	Iron	0.03131	0	0.058	.3	ppb	Erosion of natural deposits; iron or steel water delivery equipment or facilities
2002-2005	Magnesium	7.4	0	13.5	NA	ppm	Abundant naturally occurring element
2002-2005	Manganese	0.0075	0	0.0235	.05	ppm	Abundant naturally occurring element
2005 – 2006	pH	7.7	7.1	8.3	7	units	Measure of corrosivity of water
2002-2005	Sodium	108	22	226	NA	ppm	Erosion of natural deposits; byproduct of oil field activity
2005-2006	Sulfate	59	40	106	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field
2005 – 2006	Total Alkalinity as CaCO ₃	253	84	387	NA	ppm	Naturally occurring soluble mineral salts
2005 – 2006	Total Dissolved Solids	391	232	619	1000	ppm	Total dissolved mineral constituents in water
2002-2005	Total Hardness as CaCO ₃	86	5	136	NA	ppm	Naturally occurring calcium
2002-2005	Zinc	0.014	0	0.041	5	ppb	Moderately abundant naturally occurring element; used in the metal industry

Benbrook Water Authority Receives Outstanding Public Drinking Water System Award

The Texas Commission on Environmental Quality (TCEQ) awarded the BWA the Outstanding Drinking Water System Award for 2005. Many criteria must be met to earn this award, including: classification as a superior public water system; meeting standard for production, storage and pressure; effective procedures for systems security, source water protection, and conservation; vulnerability assessment and emergency response; no standards violations; and a consistent 5 year history of coliform compliance.

Only 39 of the more than 6,000 Texas public water systems received this award.

"We are extremely proud to have been recognized for this award," said Manager David Wasson. "It is satisfying to know that the excellence achieved by our team of 34 BWA professional employees brought this recognition to Benbrook."

Mr. Buck Henderson, who manages the TCEQ's Public Drinking Water Section, indicated that not only does the public water system have to meet many safety and health criteria, they must also show initiative and serve as an example for other water utilities in order to earn this award.

Benbrook Water Outstanding Public Drinking Water System

**Awarded by the
Texas Commission on
Environmental Quality**



Administration Building Expansion

The BWA officially opened its expanded administration building on December 12, 2006.

The expansion added 3,300 square feet to the existing 6,000 square foot structure. The new building presents a more welcoming face and a new service counter to BWA customers.

The building accommodates work space for 22 BWA employees. The new board room provides meeting facilities for the bi-monthly Board meetings and public meetings about BWA issues.

The addition was designed by Freese and Nichols, Inc. and the general contractor was G. L. Barron.



**Visit us online at
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This is your annual report on drinking water quality. It details where your water comes from, what it contains and how that compares with regulatory standards.

Benbrook water meets or is better than all state and federal water quality standards. Read inside for more information.