

2010 Annual Drinking Water Quality Report



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**STANDARD
PERMIT #1
KENNEDALE**

Resident/Occupant
Kennedale, TX 76060

Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems:

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 Participation Opportunities

There will be a public presentation of the material contained in this pamphlet followed by a question and answer session on the date below.

Date: July 14, 2011
Time: 7:00 pm
Location: City Hall, 405 Municipal Dr.
Phone No: 817.985.2122

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. 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. We hope this information helps you become more knowledgeable about what's in your drinking water.

WATER SOURCES: 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, and 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 before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

En Español

Este reporte incluye informacion importante sobre el agua potable. Para ayuda en espanol, favor de llamar al telefono 817-985-2163 Ext 2227 y pregunte por Dianna Garcia.

Where do we get our drinking water?

Kennedale drinking water during 2010 consisted of 98 percent GROUND and 2 percent SURFACE water. Kennedale has six wells that pull GROUND water from the Trinity aquifer (TWIN MTS, TRAVIS PEAK and PALUXY). We also purchase treated SURFACE water from the City of Fort Worth that they obtain from Lake Bridgeport, Eagle Mountain Lake, Lake Worth, Benbrook Lake, Cedar Creek Reservoir and Richland-Chambers Reservoir.

Since Fort Worth and Kennedale water sources are different, the treatment/disinfection process is different. The City of Kennedale began mixing the different water sources in May 2008. Kennedale utilizes free chlorine as a disinfectant whereas Fort Worth utilizes chloramines. Chloramines are a combination of chlorine and ammonia and are used as a disinfectant in most surface waters. Kennedale will be converting from free chlorine to chloramines in the spring of 2011.

The addition of chloramines may cause problems to persons dependent on dialysis machines.

A condition known as hemolytic anemia can occur if the disinfectant is not completely removed from the water that is used for the dialysate. Consequently, the pretreatment scheme used for the dialysis units must include some means, such as charcoal filtering, for the removal of chloramines. If you are utilizing a dialysis machine, please contact the manufacturer for information concerning this matter. In addition, chloramines in certain concentrations may be toxic to fish. If you have a fish tank, please make sure that the chemicals or filters you are using are designed for use in water that has been treated with chloramines. Your local pet store is a good source of information on this topic along with the appropriate reagents for neutralizing chloramines.

A Source Water Susceptibility Assessment for your drinking water sources 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 our 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.

ALL drinking water may contain contaminants.

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 (1-800-426-4791).

Secondary Constituents

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. Secondary constituents are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

About The Following Pages

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

Be Water Wise

Please remember to conserve water. Go to http://www.twdb.state.tx.us/DATA/DROUGHT/save_water2.asp for useful water saving tips. Year round irrigation restrictions are still in effect which prohibit lawn watering between the hours of 10 am and 6 pm.

Abbreviations and Definitions

Maximum Contaminant Level (MCL)

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

Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL)

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.

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 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 (µg/L)

City of Kennedale Groundwater Analysis Results

Inorganic Contaminants

Year (Range)	Contaminant	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2005	Gross Beta emitters	3.5	5.4	50	0	pCi/L	Decay of natural and man-made deposits.
2009	Fluoride	1.4	1.4	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2010	Arsenic	0.441	0.843	10	0	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
2010	Barium	.00973	.0219	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2010	Chromium	4.9	6.75	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
2010	Selenium	0	.781	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
2010	Thallium	0	.111	0.5	2	ppb	Discharge from electronics, glass, and drug factories; leaching from ore processing sites
2010	Nitrate (measured as Nitrogen)	0	0.11	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

Organic Contaminants TESTING WAIVED, NOT REPORTED, OR NONE DETECTED

Maximum Residual Disinfectant Level

Year (Range)	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2010	Chlorine Residual, Free	1.27	0.04	2.1	4	4	ppm	Disinfectant used to control microbes.

Disinfection Byproducts

Year	Contaminant	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2010	Total Haloacetic Acids	0	7.8	60	ppb	Byproduct of drinking water disinfection.
2010	Total Trihalomethanes	1.1	22.3	80	ppb	Byproduct of drinking water disinfection.

Lead and Copper

Year (Range)	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2010	Lead	.00071	0	.015	ppm	Corrosion of household plumbing systems; erosion of natural deposits.
2010	Copper	0.12	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits.

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 Kenedale 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>.

Secondary and Other Constituents Not Regulated

(No associated adverse health effects)

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2008 2005	Bicarbonate	417	280	515	NA	ppm	Corrosion of carbonate rocks such as limestone.
2008	Carbonate	9	0	18	NA	ppm	Corrosion of carbonate rocks such as limestone.
2008 2005	Chloride	59	46	80	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2010 2008	Hardness as Ca & Mg	16	6	41	NA	ppm	Naturally occurring calcium and magnesium.
2008 2005	pH	8.3	7.7	8.6	>7.0	units	Measure of corrosivity of water.
2010	Sodium	274	264	299	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2008 2005	Sulfate	170	113	284	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2008 2005	Total Alkalinity as CaCO ₃	369	283	422	NA	ppm	Naturally occurring soluble mineral salts.
2008 2005	Total Dissolved Solids	779	587	941	1000	ppm	Total dissolved mineral constituents in water.

City of Fort Worth Surface Water Analysis Results

Cryptosporidium Monitoring Information

TRWD monitors Fort Worth's raw water at all intake sites for Cryptosporidium, a microbial parasite common in surface water. The source is human and animal fecal waste in the watershed. The 2010 monthly testing did not detect any in water supply sources.

Contaminant	2010 Level	Range of Detects	MCL	MCLG	Measure	Common Sources of Substance
Beta particles & photon emitters ¹	6.6	4.6 to 6.6	50	0	pCi/L	Decay of natural and man-made deposits.
Fluoride	0.82	0.67 to 0.82	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	0.30	0.04 to 0.30	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrite (measured as Nitrogen)	0.031	0.005 to 0.031	1	1	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Bromate	8.75	0 to 8.75	10	0	ppb	By-product of drinking water disinfection
Haloacetic Acids	23.6	9.5 to 23.6	60	N/A	ppb	By-product of drinking water disinfection
Total Trihalomethanes	49.0	9.9 to 49.0	80	N/A	ppb	By-product of drinking water disinfection
Total Coliforms (including fecal coliform & E. coli)	Presence in 0.8% of monthly samples	0 to 0.8%	Presence in 5 % or more of monthly samples	0	% of positive samples	Coliforms are naturally present in the environment as well as feces; fecal coliforms and E. coli only come from human and animal fecal waste.
Turbidity ²	0.42 Highest single result 99.7% Lowest monthly % of samples ≤ 0.3 NTU	N/A	TT	N/A	NTU	Soil Runoff.
Contaminant	2010 Level	Range of Detects	MRDL	MRDLG	Measure	Common Sources of Substance
Chloramine	3.5	2.1 to 4.3	4.0	< 4.0	ppm	Disinfectant used to control microbes
Contaminant	High	Low	Average	MCL	MCLG	Common Sources of Substance
Total Organic Carbon ³	1	1	1	TT = % removal	N/A	Naturally occurring

¹ The test results shown above are from 2005. Because Fort Worth historically has had low levels of radionuclides in its water, TCEQ has Fort Worth on a reduced monitoring schedule. The next testing is scheduled for 2011.

² Turbidity is a measure of the cloudiness of water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

³ Total Organic Carbon is used to determine disinfection by-product precursors. Fort Worth was in compliance with all monitoring and treatment technique requirements for disinfection by-product precursors.

Secondary Constituents

This chart lists other items for which the water is tested. These items do not relate to public health but rather to the aesthetic effects. These items are often important to industrial users.

Item	Unit of Measure	2010 Range
Bicarbonate	ppm	106 to 125
Calcium	ppm	89 to 175
Chloride	ppm	12 to 28
Conductivity	µmhos/m	366 to 423
pH	units	8.1 to 8.4
Magnesium	ppm	3 to 10
Sodium	ppm	14 to 22
Sulfate	ppm	22 to 29
Total Alkalinity as CaCO ₃	ppm	106 to 125
Total Dissolved Solids	ppm	224 to 250
Total Hardness as CaCO ₃	ppm	103 to 194
Total Hardness in Grains	grains/gallon	6 to 11