

2004 Midland Water Quality Report

Drinking Water Quality Report

En Espanol

Este reporte incluye informacion importante sobre el aqua para tomar. Si tiene preguntas o discusiones sobre este reporte in espanol, favor de llamr al tel. (432) 685-7100 par hablar con una persona bilingue en espanol.

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

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-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 (1-800-426-4791).

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 to become more knowledgeable about what's in your drinking water.

Public Participation Opportunities

The Midland City Council meets on the 2nd and 4th Tuesdays of each month at City Hall, 300 N. Loraine Street, at 10:00 a.m. The Council agenda is posted for public notice at least 72 hours prior to the meetings. To find out whether water issues will be considered at a particular City Council meeting, please call the Utilities Department at (432-685-7260).

WATER SOURCE: 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. Contaminates that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

Where Do We Get Our Drinking Water?

Midland's drinking water comes from the Ogallala and Edwards-Trinity Plateau aquifers in Martin and Andrews Counties and from surface water sources owned and operated by the Colorado River Municipal Water District (CRMWD); lakes J.B. Thomas, O.H. Ivie, Moss Creek and E.V. Spence.

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 detections 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 reassessments 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 (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. These 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 and are therefore, not required to be reported in this document. They may, however, greatly affect the appearance and taste of your water.

Arsenic

The maximum contaminant level (MCL) for arsenic will be decreasing from 0.05 mg/l (50ppb) to 0.010 mg/l (10ppb) effective January 23, 2006. Some people who drink water-containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

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 for up to 97 contaminants.

Definitions and Abbreviations

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 not 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. MRDLG's 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.

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)

ppt – parts per trillion or nanograms per liter

ppq – parts per quadrillion, or picograms per liter

Report Data

Organic Contaminants NOT TESTED OR REPORTED, OR NONE DETECTED

Maximum Residual Disinfectant Level NOT TESTED OR REPORTED

Inorganic Contaminants								
Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2004-2004	Arsenic	13.500	2.3	24.7	10*	0*	ppb	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
*These arsenic values are effective January 23, 2006. Until then, the MCL is 50 ppb and there is currently no MCLG.								
2002-2002	Barium	0.086	0.018	0.155	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2002-2004	Fluoride	2.000	1.1	2.9	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2002-2004	Nitrate	2.505	0.96	4.05	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
1999-1999	Nitrite	0.005	0	0.01	1	1	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2002-2002	Selenium	26.8	17.7	35.9	50	50	ppb	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
2002-2002	Gross beta emitters	10.100	8.8	11.4	50	0	pCi/l	Decay of natural and man-made deposits.
2002-2002	Gross alpha	6.000	1.7	10.3	15	0	pCi/l	Erosion of natural deposits.
NA = MCL not applicable – not regulated. Special Monitoring Requirement.								

Disinfection Byproducts									
Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant		
2004-2004	Total Haloacetic Acids	19.955	0	57.9	60	ppb	By-product	of	drinking water
2004-2004	Total Trihalomethanes	59.100	2.4	232.5	80	ppb	By-product	of	drinking water

Unregulated Contaminants						
Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2004-2004	Bromoform	0.500	0	1	ppb	By-product of drinking water disinfection.

Lead & Copper						
Year (Range)	Contaminant	The 90 th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2003-2003	Lead	2.6000	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits
2003-2003	Copper	0.2670	1	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Turbidity

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						
Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2004-2004	Turbidity	0.90	99.00	0.3	NTU	Soil Runoff

Total Organic Carbon (TOC)

Total organic carbon (TOC) has no health effects, However, TOC provides a medium for the formation of disinfection by-products. These by-products include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the maximum contaminant level (MCL) may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Total Organic Carbon (TOC)						
Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2004-2004	Total Organic Carbon	4.2	3.7	6.0	ppm	Naturally present in the environment

Coliforms

What are coliforms?

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Fecal coliform bacteria and, in particular, E. coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform bacteria (E. coli) in drinking water may indicate recent contamination of the drinking water with fecal material. The following table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples submitted for testing by your water supplier last year.

Fecal Coliform Not Detected

Total Coliform					
Year	Constituent	Highest Monthly % of Positive Samples	MCL	Unit of Measure	Source of Constituent
2004	Total Coliform Bacteria	1	*	Presence	Naturally present in the environment.

***Presence of coliform bacteria in 5% or more of the monthly samples.**

Availability of Unregulated Contaminant Monitoring Rule Data (UCMR)

We participated in gathering data under the UCMR in order to assist EPA in determining the occurrence of possible drinking water contaminants. If any unregulated contaminants were detected, they are shown in the tables elsewhere in this report. This data may also be found on EPA's web site at <http://www.epa.gov/safewater/data/ncod.html>, or you can call the Safe Drinking Water Hotline at 1-800-426-4791.

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
2002-2002	Aluminum	118.500	0	237	50	ppb	Abundant naturally occurring element
2004-2004	Bicarbonate	182.500	162	203	NA	ppm	Corrosion of carbonate rocks such as limestone
2002-2002	Calcium	111.000	103	119	NA	ppm	Abundant naturally occurring element
2004-2004	Chloride	407.000	328	486	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
2002-2002	Copper	0.016	0	0.033	NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2002-2002	Iron	0.010	0	0.02	0.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities
2002-2002	Magnesium	68.300	61.5	75.1	NA	ppm	Abundant naturally occurring element
2004-2004	pH	7.150	6.9	7.4	NA	units	Measure of corrosivity of water
2002-2002	Sodium	238.000	133	343	NA	ppm	Erosion of natural deposits; byproduct of oil field activity
2004-2004	Sulfate	440.000	384	496	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity
2004-2004	Total Alkalinity as CaCO ₃	149.500	133	166	NA	ppm	Naturally occurring soluble mineral salts
2004-2004	Total Dissolved Solids	1204.500	931	1478	1000	ppm	Total dissolved mineral constituents in water
2002-2002	Total Hardness as CaCO ₃	558.000	510	606	NA	ppm	Naturally occurring calcium