

2005 Midland Water Quality Report

Drinking Water Quality Report

En Español

Este reporte incluye información importante sobre el agua para tomar. Si tiene preguntas o discusiones sobre éste reporte in español, favor de llamar al tel. (432) 685-7100 par hablar con una persona bilingue en español.

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 following 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 (1-432-685-7260).

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. 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 (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. 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 decreased 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. The 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 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. 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 TESTING WAIVED, NOT REPORTED, OR NONE DETECTED

Maximum Residual Disinfectant Level								
Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2005	Chloramines	1.86	0.0	4.2	4.0	<4.0	ppb	Disinfectant used to control microbes.

Inorganic Contaminants								
Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2005	Arsenic	21	3	29	10*	0*	ppb	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
*This arsenic value was effective January 23, 2006. In the event of a violation, you will be notified.								
2002	Barium	0.155	0.155	0.155	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2005	Fluoride	0.5	0.5	0.5	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2005	Nitrate	0.88	0.88	0.88	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2002	Selenium	17.7	17.7	17.7	50	50	ppb	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
2002	Gross beta emitters	8.8	8.8	8.8	50	0	pCi/L	Decay of natural and man-made deposits.
2002	Gross alpha	1.7	1.7	1.7	15	0	pCi/L	Erosion of natural deposits.

Disinfection Byproducts								
Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant	
2005	Total Haloacetic Acids	29.2	0	52	60	ppb	By-product	of drinking water disinfection.
2005	Total Trihalomethanes	59.3	1	111.4	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		
2002-2005	Bromoform	0.33	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	Lead	2.6	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits
2003	Copper	0.267	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.						
Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2005	Turbidity	0.30	100.00	0.3	NTU	Soil Runoff

Total Organic Carbon (TOC)						
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 (HAAs) which are reported elsewhere in this report.						
Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2005	Source Water	4.38	4.08	4.80	ppm	Naturally present in the environment
2005	Drinking Water	3.81	3.48	4.50	ppm	Naturally present in the environment

Fecal Coliform REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

Total Coliform						
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.						
Year	Constituent	Highest Monthly % of Positive Samples	MCL	Unit of Measure	Source of Constituent	
2005	Total Coliform Bacteria	1	*	Presence	Naturally present in the environment.	
*Presence of coliform bacteria in 5% or more of the monthly samples.						

Secondary and Other Not Regulated Constituents

No associated adverse health effects

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	Limit	Unit of Measure	Source of Constituent
2002	Aluminum	0.237	0.237	0.237	50	ppm	Abundant naturally occurring element
2005	Bicarbonate	118	118	118	NA	ppm	Corrosion of carbonate rocks such as limestone
2002	Calcium	103	103	103	NA	ppm	Abundant naturally occurring element
2005	Chloride	368	368	368	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
2002	Copper	0.033	0.033	0.033	NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2005	Hardness as Ca/Mg	425	425	425	NA	ppm	Naturally occurring calcium and magnesium
2002	Iron	20	20	20	300	ppb	Erosion of natural deposits; iron or steel water delivery equipment or facilities
2002	Magnesium	61.5	61.5	61.5	NA	ppm	Abundant naturally occurring element
2004	pH	6.9	6.9	6.9	7	units	Measure of corrosivity of water
2002	Sodium	343	343	343	NA	ppm	Erosion of natural deposits; byproduct of oil field activity
2005	Sulfate	284	284	284	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity
2005	Total Alkalinity as CaCO ₃	118	118	118	NA	ppm	Naturally occurring soluble mineral salts
2004	Total Dissolved Solids	1478	1478	1478	1000	ppm	Total dissolved mineral constituents in water
2002	Total Hardness as CaCO ₃	510	510	510	NA	ppm	Naturally occurring calcium

The City Water System

The City of Midland is embarking on significant construction over the next four years that should see us through the next decade. Construction of a new water tower will begin this year on the northwest side of town. This will be followed by addition of large water lines and additional pumps to service the tower and the growing areas of town. Improvements to the Water Purification Plant should bring us into compliance with all current and foreseeable regulations as well as increase our efficiency and security.

These projects represent a significant capital expenditure for the City. The bond issuance will be for over \$40 million. Rate increases proposed this year include paying for these expenditures.

During this time, some inconvenience may occur to the residents. Construction crews will be working around town and will undoubtedly cause increased traffic and noise in some areas. We appreciate your patience during this time as we strive to provide the best possible service to the residents of the City of Midland.

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**The Utilities Department
of the
City of Midland**

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