

Presorted
Standard
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Midland, TX
79711
Permit No. 10

POSTAL CUSTOMER MIDLAND, TX

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 ($\mu\text{g/l}$)

ppt – parts per trillion or nanograms per liter

ppq – parts per quadrillion, or picograms per liter

Disinfection Byproducts									
Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant		
2009	Total Haloacetic Acids	11.8	0	20.7	60	ppb	By-product of disinfection.	of	drinking water
2009	Total Trihalomethanes	67.3	41.6	88.5	80	ppb	By-product of disinfection.	of	drinking water

Unregulated Initial Distribution System Evaluation for Disinfection Byproducts									
This evaluation is sampling required by EPA to determine the range of total trihalomethane and haloacetic acid in the system for future regulations. The samples are not used for compliance, and may have been collected under non-standard conditions. EPA also requires the data to be reported here.									
Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant		
2005-2009	Total Haloacetic Acids	21.6	0	33.4	NA	ppb	By-product of disinfection.	of	drinking water
2005-2009	Total Trihalomethanes	49.7	0	88	NA	ppb	By-product of disinfection.	of	drinking water

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	MCL	Unit of Measure	Source of Contaminant		
2005-2009	Chloroform	0.3	0	0.6		ppb	By-product of drinking water disinfection.		
2005-2009	Bromoform	8.5	0	17		ppb	By-product of drinking water disinfection.		
2005-2009	Bromodichloromethane	1.4	0	2.8		ppb	By-product of drinking water disinfection.		
2005-2009	Dibromochloromethane	4.35	0	8.7		ppb	By-product of drinking water disinfection.		

Lead & Copper								
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 http://www.epa.gov/safewater/lead .								
Year (Range)	Contaminant	The 90 th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant		
2009	Lead	2.1	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits		
2009	Copper	0.17	0	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
2009	Turbidity	0.40	100.00	0.3	NTU	Soil Runoff

Cryptosporidium and E. Coli Monitoring Information

We monitored for Cryptosporidium, a microbial parasite that may be commonly found in surface water. Cryptosporidium may come from animal and human feces in the watershed. The result of our monitoring indicated that there may be Cryptosporidium in the raw water and/or treated finished water. Although treatment by filtration removes Cryptosporidium, it cannot guarantee 100 percent removal. The testing methods used cannot determine if the organisms are alive and capable of causing cryptosporidiosis, an abdominal infection with nausea, diarrhea and abdominal cramps that may occur after ingestion of contaminated water.

E. coli.—Escherichia coli. A bacteria which can cause acute intestinal distress.

Cryptosporidium—a protozoan associated with the disease cryptosporidiosis in humans. The disease can be transmitted through ingestion of drinking water, person-to-person contact, or other exposure routes. Cryptosporidiosis may cause acute diarrhea, abdominal pain, vomiting, and fever that lasts 1-2 weeks in healthy adults, but may be chronic or fatal in immunocompromised people.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure
2009	Cryptosporidium	0	0	0	Oocysts/L
2009	E. Coli	2.03	1.0	3.1	E. Coli/100 ml

Violations

Violation Type	Health Effects	Duration	Explanation	Steps to Correct
ENTRY POINT 003: MCL VIOLATION-FLUORIDE	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.	1/1/2009 to 3/31/2009	The Paul Davis well field has elevated fluoride levels. This source is currently no more than 20% of the City supply. These readings were taken of raw well water at the well field.	The City is redesigning the entry points to our system to insure that the water from the Paul Davis well field is blended with treated surface water to insure the levels of fluoride are always below regulatory limits. This project will be completed in 2010.
ENTRY POINT 003: MCL VIOLATION-FLUORIDE	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.	4/1/2009 to 6/30/2009	The Paul Davis well field has elevated fluoride levels. This source is currently no more than 20% of the City supply. These readings were taken of raw well water at the well field.	The City is redesigning the entry points to our system to insure that the water from the Paul Davis well field is blended with treated surface water to insure the levels of fluoride are always below regulatory limits. This project will be completed in 2010.
ENTRY POINT 003: MCL VIOLATION-FLUORIDE	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.	7/1/2009 to 9/30/2009	The Paul Davis well field has elevated fluoride levels. This source is currently no more than 20% of the City supply. These readings were taken of raw well water at the well field.	The City is redesigning the entry points to our system to insure that the water from the Paul Davis well field is blended with treated surface water to insure the levels of fluoride are always below regulatory limits. This project will be completed in 2010.
ENTRY POINT 003: MCL VIOLATION-FLUORIDE	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.	10/1/2009 to 12/31/2009	The Paul Davis well field has elevated fluoride levels. This source is currently no more than 20% of the City supply. These readings were taken of raw well water at the well field.	The City is redesigning the entry points to our system to insure that the water from the Paul Davis well field is blended with treated surface water to insure the levels of fluoride are always below regulatory limits. This project will be completed in 2010.

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 (HAA) which are reported elsewhere in this report.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2009	Source Water	5.62	4.65	7.09	ppm	Naturally present in the environment
2009	Drinking Water	5.01	4.14	5.51	ppm	Naturally present in the environment
2009	Removal Ratio	9.96	-12.2	24.4	% removal*	NA

*Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

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
2005-2009	Aluminum	0.046	0	0.091	0.05	ppm	Abundant naturally occurring element.
2005-2009	Bicarbonate	186	156	216	NA	ppm	Corrosion of carbonate rocks such as limestone
2005-2009	Calcium	112	100	124	NA	ppm	Abundant naturally occurring element
2005-2009	Chloride	501	334	667	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
2005-2009	Copper	0.018	0.001	0.035	1	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2005-2009	Hardness as Ca/Mg	547	447	646	NA	ppm	Naturally occurring calcium and magnesium
2005-2009	Iron	0.604	0.068	1.14	.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities
2005-2009	Lead	0.001	0	0.002	NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits.
2005-2009	Magnesium	90.2	84.3	96	NA	ppm	Abundant naturally occurring element.
2005-2009	Manganese	0.0111	0	0.0221	.05	ppm	Abundant naturally occurring element.
2005-2009	Nickel	0.003	0.003	0.004	NA	ppm	Erosion of natural deposits.
2005-2009	pH	7.7	7.3	8.1	>7.0	units	Measure of corrosivity of water
2005-2009	Sodium	265	189	366	NA	ppm	Erosion of natural deposits; byproduct of oil field activity
2006-2009	Sulfate	320	176	463	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity
2005-2009	Total Alkalinity as CaCO ₃	172	128	216	NA	ppm	Naturally occurring soluble mineral salts
2006-2009	Total Dissolved Solids	1336	782	1890	1000	ppm	Total dissolved mineral constituents in water
2009	Total Hardness as CaCO ₃	657	657	657	NA	ppm	Naturally occurring calcium.
2005-2009	Zinc	0.009	0.006	0.011	5	ppm	Moderately abundant naturally occurring element; used in the metal industry.

Treated Water Total Coliform REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

Treated Water Total Fecal Coliform REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA.

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. If we violate, you will be notified. 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 contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

Report Data

Inorganic Contaminants								
Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2005-2009	Arsenic	15	5	25	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.								
2005-2009	Barium	0.109	0.025	0.193	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2005-2009	Chromium	1.7	0	3.4	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
2009	Fluoride	2.9	0.97	5.71	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
*May indicate a secondary constituent violation for fluoride.								
2009	Nitrate	1.29	0.51	2.07	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits.
2005-2009	Selenium	10.7	5.8	15.5	50	50	ppb	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
2005	Gross beta emitters	18.1	18.1	18.1	50	0	pCi/L	Decay of natural and man-made deposits.
2005	Gross alpha	9.3	9.3	9.3	15	0	pCi/L	Erosion of natural deposits.

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
2009	Chloramines	1.61	1.52	1.66	4.0	<4.0	ppm	Disinfectant used to control microbes.

2009 Midland Water Quality Report

Drinking Water Quality Report

En Español

Este reporte incluye información importante sobre el agua potable. 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

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.

Our Drinking Water is Regulated

by the Texas Commission on Environmental Quality (TCEQ) and they have determined that certain water quality issues exist which prevent our water from meeting all of the requirements as stated in the Federal Drinking Water Standards. Each issue is listed in this report as a violation and we are working closely with the TCEQ to achieve solutions.

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.

A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality and will be provided to us this year. The report will describe 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 this assessment will allow us to focus our source water protection strategies. Some of this source water assessment information will be available later this year 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).

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.