

## Why do we Issue this Report?

This report is issued in compliance with the Texas Commission on Environmental Quality (TCEQ) to comply with the U.S. Environmental Protection Agency's (EPA) requirements. The enclosed report provides information regarding the contents of our water and how these contents relate to you, the consumer. This report will be provided to you annually.

## Public Participation

Every three years, the City of Highland Village inspects wells that pose a risk of contamination based on the five (5) year travel time. The next inspection will be in 2011. If you would like to be a volunteer on an inspection team, call (972) 317-2989 for more details.

## En Espanol

Este informe incluye informacion importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en espanol, favor de llamar al tel. (972)-317-2989 - par hablar con una persona bilingue en espanol.

## Contact us

- Questions about your water bill: 972-899-5090
- Information on water conservation and pollution prevention: 972-317-2989
- Water or Sewer Service: 972-317-2989
- Questions or concerns about water quality: 972-317-2989
- Reporting service interruption: 972-317-2989
- To report service interruptions between 5:00 p.m. and 7:00 a.m. Monday through Friday or on weekends and holidays, contact the Police Department's non-emergency number at 972-317-6551.

Utilities Division  
1000 Highland Village Road  
Highland Village, TX 75077  
972-317-2989



City of Highland Village

# WATER QUALITY REPORT 2009



## 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.

## 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 Environmental Protection Agency's Safe Drinking Water Hotline at 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 concerns. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your 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.

## 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. This report lists all of the federally regulated or monitored constituents, which have been found in your drinking water.



## Where Do We Get Our Water?

Our drinking water is obtained from surface and ground water sources. It comes from the following Lake/Reservoir/Aquifer: Trinity and Lewisville Lake. A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the TCEQ. 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 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.

## Regulated Substance Characteristics Inorganic Contaminants

About this page: This page lists 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.

Year	Contaminant	Average Level	Range of Detected Levels	MCL	MCLG	Unit of Measure	Source of Contaminant	Violation
2009	Barium	0.038	0.038	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	NO
2008	Fluoride	0.7	0.3-1.917	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth, discharge from fertilizer and aluminum factories	NO
2009	Nitrate	0.46	0.07-0.67	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	NO
2006-2008	Nitrite	0.05	0-0.42	1	1	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	NO
2005	Gross beta emitters	4.4	4.1-4.7	50	0	pCi/L	Decay of natural and manmade deposits	NO

### Organic Contaminants

2009	Atrazine	0.15	0-0.24	3	3	ppb	Runoff from herbicide used on row crops	NO
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### Disinfectant Residuals

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Disinfectant	Violation
2009	Chloramine Residual	2.35	.05	3.9	4	4	ppm	Disinfectant used to control microbes	NO

### Disinfection By-Products

Year	Contaminant	Average of all Sampling Points	Range of Detected Levels	MCL	Unit of Measure	Source of Contaminant	Violation
2009	Total Trihalomethanes	26.9	21-32.7	80	ppb	By-product of drinking water disinfection	NO
2009	Total Haloacetic Acids	14.2	11.1-18.4	60	ppb	By-product of drinking water disinfection	NO

### Lead and Copper

Year	Contaminant	90 <sup>th</sup> Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant	Violation
2007	Lead	3.4	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits	NO
2007	Copper	0.311	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	NO

"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>."

### Unregulated Contaminants

Year	Contaminant	Average of all Sampling Points	Range of Detected Levels	Unit of Measure	Source of Contaminant
2009	Chloroform	31.33	18.31-48.1	ppb	By-product of drinking water disinfection.
2009	Bromoform	0.97	0-1.94	ppb	By-product of drinking water disinfection.
2009	Bromodichloromethane	14.25	12.58-15.2	ppb	By-product of drinking water disinfection.
2009	Dibromochloromethane	6.04	1.63-9.63	ppb	By-product of drinking water disinfection.

Availability of Unregulated Contaminant Monitoring Rule Data (UCMR) – We participate in gathering data under the UCMR 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/>

### Secondary and Not Regulated Constituents (No associated adverse health effects)

Year	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2009	Aluminum	0.013	0.013	0.013	.05	ppm	Abundant naturally occurring element
2008	Bicarbonate	226	94	342	N/A	ppm	Corrosion of carbonate rocks such as limestone
2009	Calcium	26	26	26	N/A	ppm	Abundant naturally occurring element
2005	Carbonate	7	0	13	N/A	ppm	Corrosion of carbonate rocks such as limestone
2008	Chloride	104	24	186	300	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity
2009	Copper	0.003	0.003	0.003	1	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2008	Hardness as Ca/Mg	103	7	309	N/A	ppm	Naturally occurring calcium and magnesium
2009	Magnesium	3	3	3	N/A	ppm	Abundant naturally occurring element
2009	Manganese	0.0022	0.0022	0.0022	.05	ppm	Abundant naturally occurring element
2009	Nickel	0.002	0.002	0.002	N/A	ppm	Abundant naturally occurring element
2008	P.Alkalinity as CaCO <sub>3</sub>	5	0	11	N/A	ppm	Naturally occurring soluble mineral salts
2008	pH	8.4	8.1	8.7	>7	units	Measure of corrosivity of water
2009	Sodium	33	23	42	N/A	ppm	Erosion of natural deposits; byproduct of oil field activity
2008	Sulfate	275	39	1120	300	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity
2008	Total Alkalinity as CaCO <sub>3</sub>	237	94	352	N/A	ppm	Naturally occurring soluble mineral salts
2008	Total Dissolved Solids	817	191	2050	1000	ppm	Total dissolved mineral constituents in water
2009	Zinc	0.011	0.011	0.011	5	ppm	Moderately abundant naturally occurring element; used in the metal industry

### Turbidity

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant	Violation
2009	Turbidity	0.20	100.00	0.3	NTU	Soil runoff	NO

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.

### 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	Contaminant	Highest Monthly Number of Positive Samples	MCL	Unit of Measure	Source of Contaminant	Violation
2009	Total Coliform Bacteria	0		Presence	Naturally present in the environment	NO

Fecal Coliform - monthly reporting found none

## Key to Table Abbreviations

**Maximum Contaminant Level (MCL)** - The highest permissible 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 a 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.

**NTU** - Nephelometric Turbidity Units

**ppm** - parts per million, or milligrams per liter (mg/L)

**ppb** - parts per billion, or micrograms per liter (ug/L)

**ppq** - parts per quadrillion, or picograms per liter

**MFL** - million fibers per liter (a measure of asbestos)

**pCi/L** - picocuries per liter (a measure of radioactivity)

**ppt** - parts per trillion, or nanograms per liter

## Outdoor water use - Save water by the yard

Many people water their lawns too often and for too long, over-saturating plants. It's usually not necessary to water grass every day. Instead, test your lawn by stepping on a patch of grass; if it springs back, it doesn't need water.

Regular maintenance of an irrigation system can help ensure that water is distributed evenly on the lawn and does not overspray onto paved areas. Look for an irrigation contractor certified in system maintenance and auditing to keep your system working efficiently.

An inefficient irrigation system can waste water and money each month, but using weather-based irrigation scheduling on a moderate sized yard, for example, can reduce a household's outdoor water use by about 15%, saving up to 37 gallons of water every day. Alternatively, a weather-based irrigation controller can do the scheduling for you, providing the right amount of water to your plants automatically, if adjusted properly.

Landscaping with plants that are not adaptive to our climate increases water use and costs. Instead, use native plants, or species adapted to the local climate, which reduce outdoor water use by 20 to 50 percent.