

2011 Annual Drinking Water Quality Report

CITY OF PLANO PWS 0430007 (972) 769-4160

This report is available online at livegreeninplano.com

En Español: Este reporte incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. (972) 769-5130 para hablar con una persona bilingüe en español.

OUR DRINKING WATER IS REGULATED

This report is a summary of the quality of the water we provide our customers. In order to ensure tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The City of Plano's analysis was made by using data from the most recent EPA required tests and is presented in the attached pages. Food and Drug Administration (FDA) regulations establish limits for contaminants to bottled water providing the same protection for public health. We hope this information helps you become more knowledgeable about what's in your drinking water.

Sources of Drinking Water

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. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and headaches.

Where Do We Get Our Drinking Water?

The source of drinking water used by City of Plano is purchased surface water from the North Texas Municipal Water District (NTMWD). To contact NTMWD, call (972) 442-5405. A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality (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 source water protection strategies. Some of this source water assessment information is available on Texas Drinking Water Watch at <http://dwww.tceq.state.tx.us/DWWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

Possible Contaminants in Source Water

When drinking water meets federal standards there may not be any health 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.

- > Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- > Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- > Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- > Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- > Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

The presence of contaminants does NOT necessarily indicate your drinking water poses a health risk. For more information about contaminants and potential health effects call the EPA'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. These secondary constituents are regulated by the State of Texas, not the EPA. They are NOT causes for health concern, but may greatly affect the appearance and taste of your water.

Abbreviations and Definitions

The following tables contain scientific terms and measures, some of which may require explanation.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Residual Disinfectant Level or 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 or 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 contaminants.

MFL: million fibers per liter (a measure of asbestos)

mrem/year: millirems per year (a measure of radiation absorbed by the body)

N/A: Not applicable.

NTU: Nephelometric Turbidity Units.

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

ppb: parts per billion or micrograms per liter—or one ounce in 7,350,000 gallons of water.

ppm: parts per million or milligrams per liter—or one ounce in 7,350 gallons of water.

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or pictograms per liter (pg/L)

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 immuno-compromised persons (such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with other immune system disorders) can be particularly at risk for infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines and appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Public Participation Opportunities

To learn more about future public meetings concerning your drinking water or about how to protect and save our water supplies, please visit plano.gov/water or livegreeninplano.com.

INORGANIC CONTAMINANTS

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2011	Arsenic	<0.001	<0.001	0.001	0.01	0.01	ppm	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
2011	Barium	0.04	0.04	0.04	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2011	Fluoride	0.66	0.46	0.66	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2011	Nitrate	0.55	<0.05	0.55	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2010	Gross beta emitters	N/A	N/A	4.4	50	0	pCi/L	Decay of natural and man-made deposits.

ORGANIC CONTAMINANTS

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2011	Atrazine	0.19	0.18	0.2	3	3	ppb	Runoff from herbicide used on row crops.
2011	Simazine	0.08	<0.07	0.16	4	4	ppb	Runoff from herbicide used on row crops.
2011	Di(2-ethylhexyl)adipate	0.37	<0.062	0.74	400	400	ppb	Discharge from chemical factories.

MAXIMUM RESIDUAL DISINFECTANT LEVEL

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2011	Chlorine Residual (Chloramines)	2.32	0.7	3.5	4.0	<4.0	ppm	Disinfectant used to control microbes.
2011	Chlorine Dioxide	0	0	0.15	0.8	0.8	ppm	Disinfectant.
2011	Chlorite	0.48	0	0.80	1.0	N/A	ppm	Disinfectant.

DISINFECTION BYPRODUCTS

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2011	Total Haloacetic Acids	16.24	11.6	20.6	60	N/A	ppb	Byproduct of drinking water disinfection.
2011	Total Trihalomethanes	36.53	26	44	80	N/A	ppb	Byproduct of drinking water disinfection.

UNREGULATED CONTAMINANTS

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2011	Chloroform	13.89	10.3	16.5	N/A	N/A	ppb	Byproduct of drinking water disinfection.
2011	Bromoform	1.1	<1	1.5	N/A	N/A	ppb	Byproduct of drinking water disinfection.
2011	Bromodichloromethane	14.294	9.8	17.1	N/A	N/A	ppb	Byproduct of drinking water disinfection.
2011	Dibromochloromethane	7.7	5.1	10.5	N/A	N/A	ppb	Byproduct of drinking water disinfection.

NOTE: Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

LEAD AND COPPER

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2011	Lead	0.00131	0.000359	0.00959	AL=15	15	ppb	Corrosion of customer plumbing. Action Level = 15
2011	Copper	0.8466	0.251	1.42	AL=1.3	1.3	ppm	Byproduct of drinking water disinfection. Action Level = 1.3

Additional Health Information for Lead: 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 NTMWD 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>.

TCEQ VIOLATIONS

The City of Plano exceeded its maximum contaminant level for total coliform on one occasion in April 2011.

TURBIDITY

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
2011	Turbidity	0.96	99.15	0.3	NTU	Soil runoff.

NOTE: 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 ORGANIC CARBON

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Chemical
2011	Source Water	4.92	4.32	6.34	ppm	Naturally present in the environment.
2011	Drinking Water	3.93	3.52	4.66	ppm	Naturally present in the environment.
2011	Removal Ratio	20%	11%	35%	% removal*	N/A

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

NOTE: 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.

TOTAL COLIFORM

Year	Contaminant	Highest Monthly Number of Positive Samples	MCL	Unit of Measure	Source of Contaminant
2011	Total Coliform Bacteria	23	*	Presence	Naturally present in the environment.

NOTE: No more than 5% positive. Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing 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.

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 Contaminant
2011	Bicarbonate	100	73	120	N/A	ppm	Corrosion of carbonate rocks such as limestone.
2011	Calcium	43	32	54	N/A	ppm	Abundant naturally occurring element.
2011	Chloride	28	25	33	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2011	Iron	<0.06	<0.05	0.07	0.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2011	Magnesium	4.1	3.9	4.3	N/A	ppm	Abundant naturally occurring element.
2011	Manganese	0.001	<0.001	0.002	0.05	ppm	Abundant naturally occurring element.
2011	Nickel	0.004	0.004	0.005	N/A	ppm	Erosion of natural deposits.
2011	pH	7.7	7.6	7.9	>7.0	ppm	Measure of corrosivity of water.
2011	Sodium	32	29	39	N/A	ppm	Corrosion of carbonate rocks such as limestone.
2011	Sulfate	67	65	68	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2011	Total Alkalinity as CaCO ₃	88	63	104	N/A	ppm	Naturally occurring soluble mineral salts.
2011	Total Dissolved Solids	259	249	263	1,000	ppm	Total dissolved mineral constituents in water.
2011	Total Hardness as CaCO ₃	124	95	153	N/A	ppm	Naturally occurring calcium.
2011	Zinc	<0.01	<0.01	0.01	5	ppm	Moderately abundant naturally occurring element used in the metal industry.

The City of Plano has been granted a two-year extension by the Texas Commission on Environmental Quality (TCEQ) to the Stage 2 Disinfection Byproducts Rule (DBP2) in accordance with 30 TAC §290.115(a)(2) because it buys some or all of its water from the North Texas Municipal Water District (NTMWD). This extension is warranted because the NTMWD is making extensive and complex capital improvements to the Wylie Water Treatment Plant to facilitate compliance with the rule; the NTMWD and its customers have demonstrated a need for the extension by having one or more locations where high DBP results were evident or possible during drought conditions.

The extension is valid from April 1, 2012 to March 30, 2014. During this period, compliance monitoring will continue under the Stage 1 Disinfection Byproduct Rule. Compliance monitoring for DBP2 begins on April 1, 2014.

Please share this information with all people who drink this water, especially those who may not have received this notice directly (i.e., people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

If you have questions regarding this matter, you may contact Gerald Cosgrove at (972) 941-7152.

Posted /Delivered on: June 30, 2012.