

2016 Town of Flower Mound Annual Water Quality Report



The Town of Flower Mound is pleased to present the 2016 Annual Water Quality Report. Our goal is to meet the water usage needs of our customers by providing the highest quality water available. Public participation regarding the water system is offered through attending public meetings, calling 972.539.SERV, emailing publicworks@flower-mound.com, or visiting www.flower-mound.com. Specific questions or concerns about water quality may be directed to 972.874.6400.

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

Where Do We Get Our Drinking Water?

Flower Mound (PWS #0610023) purchased 4,781,110,000 gallons of treated drinking water from Dallas Water Utilities (DWU), and the Upper Trinity Regional Water District (UTRWD). Water loss, which includes water not accounted for through metering and/or estimation, totaled 272,033,063 for 2016. All of Flower Mound's water is surface water, obtained from lakes and rivers. The majority of this water is taken from Lake Lewisville, but can also come from Lake Ray Hubbard, and Lake Tawakoni. The TCEQ Source Water Susceptibility report describes the susceptibility and types of constituents that may come into contact with the drinking water source based on human activities and natural conditions. Please call 972.874.6400 for more information on source water assessments and protection efforts of our system.

Secondary Constituents

Constituents, such as calcium, sodium, or iron, commonly found in drinking water at varying concentration, can influence the taste, color, and odor of water. The State of Texas regulates these taste and odor constituents, called secondary constituents, but does not consider them cause for health concern. The secondary constituents are not presented in this annual report, however, monthly test results can be provided upon request.

En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. 972.874.6000 para hablar con una persona bilingüe en español.

All Drinking Water May Contain Contaminants and Cryptosporidium

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 at 800.426.4791.

Cryptosporidium is a microscopic intestinal parasite found naturally in the environment. Although filtration removes most Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our water providers regularly test both treated and untreated water for this pathogen and have found it only in the untreated (rivers and lakes) water supply. Not everyone exposed to the organism becomes ill. Individuals with healthy immune systems usually overcome the effects within a few weeks. However, immune-compromised people are at a greater risk of developing life-threatening illness. We encourage at-risk individuals to consult their doctor regarding appropriate precautions to prevent infection. To request more information on Cryptosporidium, please call the U.S. EPA's Safe Drinking Water Hotline at 800.426.4791.

Definitions / Abbreviations

Action Level (AL) - The concentration of a contaminant that, if reached, triggers treatment or other requirements that a water system must follow.

Maximum Contaminant Level Goal (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 (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 (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.

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

Water Quality Monitoring Results

The following tables list all of the federally regulated or monitored constituents that have been found in your drinking water. The U.S. EPA requires water systems to test up to 90 constituents. As the tables illustrate, the drinking water provided to Flower Mound customers met or exceeded all established standards. The tables identify contaminants detected during 2016, or the most recent testing done in accordance with regulations, including the maximum amounts allowed by state and federal regulations.

Coliforms

Total coliform bacteria are used as indicators of microbial contamination of drinking water. While not disease-causing (pathogen), they are often found with other microbes that are pathogens. Coliform bacteria are harder than many pathogens; therefore, their absence from water is an indication that the drinking water is microbiologically safe for human consumption. The Total Coliform table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples during 2016.

Unregulated Contaminant Monitoring Regulations (UCMR)

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Any unregulated contaminants detected are reported in the following table.

For additional information and data visit www.epa.gov/safewater/ucmr/ucmr2/index.html, or call the Safe Drinking Water Hotline at 800.426.4791.

REGULATED CHARACTERISTICS							
DETECTED INORGANIC CONTAMINANTS							
Contaminant	Water District	Date Sampled	Average Amount Detected	Range of Detected Levels	MCL	MCLG	Source of Contaminant
Barium (ppm)	Dallas	2016	0.018	0.010 – 0.025	2	2	Erosion of natural deposits; discharge of drilling wastes or metal refineries.
	UTRWD	2016	0.039	0.037 – 0.039			
	Flower Mound	2009	0.038	0.038 – 0.038			
Fluoride (ppm)	Dallas	2016	0.704	0.544 – 1.02	4	4	Water additive to promote strong teeth; erosion of natural deposits.
	UTRWD	2016	1.02	ND – 1.02			
	Flower Mound	2010	0.56	0.24 – 0.68			
Nitrate (ppm)	Dallas	2016	0.426	0.220 – 0.538	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
	UTRWD	2016	0.671	0.474 – 0.671			
	Flower Mound	2016	0.631	0.354 – 1.17			
Selenium (ppb)	Dallas	2015	1.57	<1.00 – 2.8	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Cyanide (ppb)	Dallas	2016	88.2	6.45 – 164.0	200	200	Discharge from Steel/metal factories; discharge from plastic and fertilizer factories.
	UTRWD	2016	0.134	NA			
Bromate (ppb)	Dallas	2016	<10	<0.03 – <10	10	10	By-product of drinking water disinfection.
Antimony (ppb)	Dallas	2016	0.09	<0.200 – 0.27	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Arsenic (ppb)	Dallas	2016	0.27	<0.700 – 0.80	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
DETECTED ORGANIC CONTAMINANTS							
Atrazine (ppb)	Dallas	2015	0.11	<0.08 – 0.30	3	3	Herbicide runoff
	UTRWD	2016	0.34	ND – 0.34			
	Flower Mound	2009	0.23	0.0 – 0.48			
Simazine (ppb)	Dallas	2015	0.04	<0.05 – 0.25	4	4	Herbicide runoff
	UTRWD	2016	0.08	ND – 0.08			
	Flower Mound	2009	0.03	0.0 – 0.23			
Bis(2-ethylhexyl)phthalate (ppb)	Dallas	2016	0.54	<0.5 – 2.7	6	6	Contact with rubber or plastic
	UTRWD	2007	2.81	Not reported			
Di(2-ethylhexyl)phthalate (ppb)	Dallas	2016	1.41	0.0 – 2.81	6	0	Discharge from rubber and chemical factories
	Flower Mound	2007	1.41	0.0 – 2.81			
Lindane (ppt)	Flower Mound	2009	5.83	0.0-140	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens.
DETECTED RADIOACTIVE CONTAMINANTS							
Combined Radium (226 & 228) (pCi/L)	Dallas	2011	1.0	1.0	5	0	Erosion of natural deposits.
	UTRWD	2011	1	ND 1			
Gross Beta Emitters (pCi/L)	Dallas	2011	5.3	4.0 – 7.2	50	0	Decay of natural and man-made deposits.
	UTRWD	2011	4.4	not reported			
Flower Mound	2009	1.95	0.0 – 5.2				
DISINFECTION BY-PRODUCTS							
Total Trihalomethanes (ppb)	Dallas	2016	16.5	6.7 – 26.0	80	0	By-product of drinking water disinfection
	UTRWD	2016	33	11.2 – 33			
	Flower Mound	2016	17.9	8.37 – 22.1			
Total Haloacetic Acids (ppb)	Dallas	2016	15.6	<2.00 – 19.2	60	0	By-product of drinking water disinfection
	UTRWD	2016	20	7.1 – 20			
	Flower Mound	2016	7.89	1.20 – 24.0			
MAXIMUM RESIDUAL DISINFECTANT LEVEL							
Total Chloramine Residual (ppm)	Dallas	2016	2.12	1.92	2.46	4.0	<4.0 Disinfectant used to control microbes
	UTRWD	2016	3.6	3.2	3.6		
	Flower Mound	2016	2.67	1.0	4.10		
Contaminant	MCL	Date Sampled	Unit of Measure	Highest Monthly % of Positive Samples	Source of Contaminant		
Total Coliform Bacteria	*	2016	Presence	2.53	Naturally present in the environment		
* Presence of coliform bacteria in 5% or more of monthly samples							
Contaminant	Water District	Date Sampled	90 th Percentile Values	Number of Sites Exceeding Action Level	MCL	Unit of Measure	Source of Contaminant
Lead (ppb)	Dallas	2015	1.1	0	15	ppb	Corrosion of household plumbing systems
	Flower Mound	2015	2.10	0			
Copper (ppm)	Dallas	2015	0.400	0	1.3	ppm	Corrosion of household plumbing systems
	Flower Mound	2013	0.98	0			
UNREGULATED DISINFECTION BY-PRODUCTS							
Contaminant	Water District	Date	Average Amount Detected	Minimum and Maximum Levels	Source of Contaminant		
Chloroform (ppb)	Dallas	2016	6.09	5.69 – 6.78	By-product of drinking water disinfection		
	Flower Mound	2016	7.22	3.34 – 11.9			
Bromoform (ppb)	Flower Mound	2016	1.26	<1 – 2.07	By-product of drinking water disinfection		
Bromodichloro-methane (ppb)	Dallas	2016	4.97	3.90 – 5.91	By-product of drinking water disinfection		
	Flower Mound	2016	5.35	2.45 – 7.52			
Dibromochloromethane (ppb)	Dallas	2016	2.98	1.20 – 4.66	By-product of drinking water disinfection		
	Flower Mound	2016	4.51	1.27 – 6.68			
Chloromethane (ppb)	Flower Mound	2009	1.12	0 – 3.31	By-product of drinking water disinfection		
Unregulated contaminant monitoring is conducted to help the EPA determine where certain parameters occur, and whether those contaminants need to be monitored.							
Turbidity	Water District	Date Sampled	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
Turbidity	Dallas	2016	0.15	100	0.3	NTU	Soil runoff.
	UTRWD	2016	0.29	100	0.03 - 0.29	N/A	
Contaminant	Water District	Date Sampled	Average	Minimum and Maximum Levels	Source of Contaminant		
Total Organic Carbon (ppm)	Dallas	2016	3.51	2.86 – 5.43	Naturally present in the environment		
	UTRWD	2016	Max 5.23	2.10 – 5.23			

HAA5 and THM

This evaluation is required by EPA to determine the range of total trihalomethane and haloacetic acids in the system for future regulations. The samples are not used for compliance, and may have been collected under non-standard conditions. EPA requires the data to be reported here. Please contact the Town of Flower Mound if you have any questions.

Lead and Copper

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children, if present in drinking water. Lead in drinking water is primarily introduced 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. Lead and copper concentrations can become elevated as the water remains in contact with plumbing for long periods. 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 by visiting www.epa.gov/safewater/lead.