



The Town of Northlake

WATER QUALITY REPORT 2016

PWS ID# 0610235

THE TOWN OF NORTHLAKE PROVIDES EXCEPTIONAL WATER to you!

Once again we are proud to present our annual water quality report. This edition covers all testing completed from January through December 2016. We are pleased to tell you that our water meets all state and federal drinking water laws. As in the past, we are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users. For more information about this report, or for any questions relating to your drinking water, please call Eric J. Tamayo, Public Works Director at 940-648-3290, x251.

WHERE DOES OUR WATER COME FROM?

The Town's drinking water is obtained from Town owned wells, Upper Trinity Regional Water District and the City of Fort Worth's surface water system. The City of Fort Worth obtains surface water from Lake Worth, Richland Chambers Reservoir, Eagle Mountain Lake, Clear Fork, Trinity River, and Cedar Creek Reservoir and supplies the south portion of our Town. The northern subdivisions are supplied by Upper Trinity Regional Water District from Lake Lewisville.



WHY FIXING LEAKS AROUND YOUR HOME IS IMPORTANT

A single conservation measure that can have the biggest impact is to fix all leaks. Even the smallest leak can have a big effect on your water usage and your wallet. Here are some leak facts that may surprise you:

- A leaking toilet can use 90,000 gallons of water in 30 days.
- A dripping faucet or hose bib can lose up to 180 gallons a month or 2,160 gallons per year.
- About one in every 318 homes or buildings has a leak.
- A typical toilet leak loses 30,000 gallons of water per year.
- Washing a single car uses 150 gallons of drinking water.
- Using a broom instead of a hose to clean a sidewalk saves 150 gallons of water.
- Collecting water for gardening from the faucet while waiting for hot water saves about 250 gallons of water a month.

Source: American Leak Detection and Water Online.

WHY PROVIDE A Water Quality Report?

A Source Water Susceptibility Assessment for your water sources is currently being updated by the Texas Commission on Environmental Quality. 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. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from wastewater 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 stormwater 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 stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.



In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: <http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=>

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww.tceq.texas.gov/DWW/>

TWO COMMON CROSS-CONNECTIONS ARE:

Any hose is a cross-connection when left submerged in a swimming pool, laundry sink, or car wash bucket.

To protect your water from these cross connections, make sure to have air vacuum breakers installed on each of your hose bibs.

These simple devices are inexpensive and can be purchased from your local hardware store. They are easy to install; you just screw them on.

Your in-ground irrigation system is also a cross connection so make sure to do the following:

1. Confirm your irrigation system has a back flow assembly device, if not, get one installed.
2. Test the backflow prevention device annually
3. Turn in your test results to the Town of Northlake Public Works Department.

If you have any questions, please contact Eric J. Tamayo, Public Works Director at 940-648-3290, x251.



UNDERSTANDING THE CHARTS: The charts shown on the following pages shows the result of Northlake’s water quality analysis related to public health. Every regulated contaminant detected in the water, even in the most minute traces, is listed. The charts contains the name of each substance, the year the sample was tested, the range of detected levels, the highest level allowed by regulation (MCL), key units of measurement, the usual source of such contamination, and footnotes* explaining the findings.

Contaminant	Measure	MCL	2016 Highest Single Result	Lowest monthly % of samples ≤ 0.3 NTU	MCLG	Common Sources of Substance
Turbidity ¹	NTU	TT	0.36	99.7%	N/A	Soil runoff (Turbidity is a measure of the cloudiness of water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Contaminant	Measure	MCL	2016 Level	Range	MCLG	Common Sources of Substance
Total Coliforms (including fecal coliform & E. coli)	% positive samples	Presence in 5% or less of monthly samples	Presence in 2.3% of monthly samples	0.4 - 2.3%	0	Coliforms are naturally present in the environment as well as feces; fecal coliforms and E. coli only come from human and animal fecal waste.

Contaminant	MCL	2016 Level	Range	MCLG	Common Sources of Substance
Alpha particles¹ (pCi/L)	15	2	2 to 2	N/A	Erosion of natural deposits of certain minerals that are radioactive and may emit forms of radiation known as alpha radiation
Gross Beta particles & photon emmitters¹ (pCi/L)	50	5.6	4 TO 5.6	N/A	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation
Radium 226/228 (pCi/L)	5	0	0	0	Erosion of natural deposits
Arsenic (ppb)	10	1.40	0 - 1.40	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2	0.06	0.05 - 0.06	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (Total) (ppb)	100	0.73	0 - 0.73	100	Discharge from steel and pulp mills, erosion of natural deposits
Cyanide (ppb)	200	80.3	0 - 80.3	200	Discharge from plastic and fertilizer factories; discharge from steel and metal factories
Fluoride (ppm)	4	0.50	0.23 - 0.50	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen) (ppm)	10	0.66	0.26 - 0.66	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (measured as Nitrogen) (ppm)	1	0.03	0.01 - 0.03	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Bromate (ppb)	10	5.50	0 to 10.4	0	By-product of drinking water disinfection
Haloacetic Acids (ppb)	60	14.7	7.7 - 14.7	N/A	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	80	26.5	6.1 - 26.5	N/A	By-product of drinking water disinfection

Contaminant	High	Low	Average	MCL	MCLG	Common Sources of Substance
Total Organic Carbon	1	1	1	TT = % removal	N/A	Naturally occurring

¹ Because of historically low levels of radionuclides in its water, TCEQ has Fort Worth on a reduced monitoring schedule. The test results shown are from 2013 through 2014.

Total Organic Carbon is used to determine disinfection by-product precursors. Fort Worth was in compliance with all monitoring and treatment technique requirements for disinfection by-product precursors.

UNREGULATED CONTAMINANTS

Contaminant	Range of Detects	2016 Level	MCL	MCLG	Common Sources of Substance
Chloral Hydrate (ppb)	0.53 - 0.93	0.93	Not regulated	None	By-product of drinking water disinfection
Bromoform (ppb)	0 - 4.16	4.16			
Bromodichloromethane (ppb)	2.15 - 7.26	7.26			By-products of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
Chloroform (ppb)	4.26 - 13	13			
Dibromochloromethane (ppb)	0 - 10.2	10.2			
Monochloroacetic Acid (ppb)	0 - 3.0	3.0			
Dichloroacetic Acid (ppb)	5.90 - 11.8	11.8			
Trichloroacetic Acid (ppb)	0 - 1.5	1.5			By-products of drinking water disinfection; not regulated individually; included in Haloacetic Acids
Monobromoacetic Acid (ppb)	0 - 2.2	2.2			
Dibromoacetic Acid (ppb)	0 - 5.1	5.1			

Message from the EPA

All 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 the 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 1-800-426-4791.

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/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).

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 Town of Northlake 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 drinking 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://water.epa.gov/drink/info/lead.

SECONDARY CONSTITUENTS

These items do not relate to public health but rather to the aesthetic effects. These items are often important to industry.

Contaminant	2016 Level
Bicarbonate (ppm)	112 - 145
Calcium (ppm)	41.1 - 58
Chloride (ppm)	15.8 - 20.2
Conductivity (µmhos/cm)	322 - 396
pH (units)	8.1 - 8.4
Magnesium (ppm)	4.63 - 5.86
Sodium (ppm)	15.1 - 17.8
Sulfate (ppm)	15.8 - 29.9
Total Alkalinity as CaCO ³ (ppm)	112 - 145
Total Dissolved Solids (ppm)	180 - 227
Total Hardness as CaCO ² (ppm)	126 - 164
Total Hardness in Grains (grains/gallon)	7-10

Disinfectants: The Town of Northlake, City of Fort Worth and Upper Trinity Regional Water District use chloramines, which is a mixture of chlorine and ammonia, to disinfect the water.

TABLE DEFINITIONS

AL (Action Level): The concentration of a contaminant, if exceeded, triggers treatment or other requirements which a water system must follow.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MCL (Maximum Contaminant Level): 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.

NA: Not applicable

ND: Not detected

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water.

Turbidity: A measurement of the amont of particulates in water in Nephelometric Turbidity Units (NTU). Particulates in water can include bacteria, viruses and protozoans that can cause disease. Turbidity measurements are used to determin the effectiveness of the treatment processes used to removed these particulates.

REGULATED CONTAMINANTS							
Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5) (ppb)	2016	20	7.1 - 20	No goal for the total	60	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM) (ppb)	2016	7.1 - 20	11.2 - 33	No goal for the total	80	N	By-product of drinking water disinfection.
INORGANIC CONTAMINANTS							
Barium (ppm)	2016	0.039	0.037 - 0.039	2	2	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Bromate (ppb)	2016	6.77	1.23 - 6.77	0	10	N	By-product of drinking water disinfection.
TOC (ppm)	2016	5.23	2.10 - 5.23	N/A	TT	N	Naturally present in the environment.
Fluoride (ppm)	2016	0.102	ND - 0.102	4.0	4.0	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen] (ppm)	2016	0.671	0.474 - 0.671	10	10	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Cyanide (ppm)	2016	0.134	0	4	4	N	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
Turbidity (NTU)	2016	0.29	0.03 - 0.29	10	TT	N	Soil runoff.
SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES							
Atrazine (ppb)	2016	0.34	ND - 0.34	3	3	N	Herbicide runoff
Simazine (ppb)	2016	0.08	ND - 0.08	4	4	N	Herbicide runoff.

	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Gross Beta Emitters (pCi/L)	2011	4.4	ND to 4.4	0	50	N	Decay of natural and man-made deposits.
Combined Radium (pCi/L)	2011	1	ND to 1	0	5	N	Erosion of natural deposits.

TOWN OF NORTHLAKE WATER SYSTEM CONSTITUENTS DETECTED FOR 2016							
REGULATED CONTAMINANTS							
Contaminant	Collection Date	Average Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	2016	12	7.8 - 17.1	No goal for the total	60	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM) (ppb)	2016	9	3.5 - 14	No goal for the total	80	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	
Barium (ppm)	2014	0.016	0.016 - 0.016	2	2	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium (ppb)	2014	12	12 - 12	100	100	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride (ppm)	2014	0.743	0.743 - 0.743	4	4.0	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen] (ppm)	2016	0.368	0.0465 - 0.368	10	10	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite [measured as Nitrogen] (ppm)	2015	.004	0 - .004	1	1	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium (ppb)	2014	1.5	1.5 - 1.5	50	50	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Combined Radium 226/228 (pCi/L)	09/22/2011	1	1 - 1	0	5	N	Erosion of natural deposits.

Contaminant	Date Sampled	MCGL	Action Level (AL)	90th Percentile	# Sites Over AL	Violation	Likely Source of Contamination
Copper ppm	08/02/2012	1.3	1.3	0.158	0	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Leopard ppb	08/02/2012	0	15	3.12	1	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Contaminant	Collection Date	Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest Number of Positive Samples	Fecal Coliform or E. Coli Maximum Contaminant Level	Total # of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
Coliform Bacteria	2016	0	1 Positive Monthly Sample	1	0	0	No	Naturally present in the environment.

MAXIMUM DISINFECTANT LEVEL							
Disinfectant	Collection Date	Average Level	Min Level	Max Level	MRDLG & MRDL	Violation	Source
Chloramines (ppm)	2016	2.2	0.5	3.9	4	N	By-product of drinking water disinfection
Free Chlorine (ppm)	2016	1.9	0.2	3.5	4	N	By-product of drinking water disinfection

In the water loss audit submitted to the Texas Water Development Board for calendar year 2015, our system lost an estimated 23.7 MG of water. The Town did not have to turn in a water loss audit for 2016. If you have questions regarding the audit please call 940-648-3290.

UNREGULATED CONTAMINANTS

Contaminant	Range of Detects	2016 Level	MCL	MCLG	Common Sources of Substance
Bromochloroacetic Acids (ppb)	3.0 - 6.5	6.5	Not regulated	None	By-products of drinking water disinfection.
Dichloroacetic Acid (ppb)	6.8 - 10.8	10.8			
Bromodichloromethane (ppb)	1.35 - 5.18	5.18			
Chloroform (ppb)	2.14 - 6.26	6.26			
Dibromochloromethane (ppb)	1.24 - 2.61	2.61			
Monochloroacetic Acid (ppb)	0 - 5.8	5.8			
Trichloroacetic Acid (ppb)	1.0 - 1.4	1.4			

VIOLATION

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards.

During June 1 – September 30, 2015 we did not test for Lead & Copper and therefore cannot be sure of the quality of your drinking water during that time.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for Lead & Copper, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which the follow-up samples will be taken.

VIOLATION				
Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were or will be taken
Lead & Copper tap water sampling	10 samples every three years	0	June 1 – Sept 30, 2015	June 1 – Sept 30, 2016

The Town has completed the lead and copper testing. We are now in compliance with TCEQ. For more information, please contact Eric J. Tamayo at 940-242-5704 or 1400 FM 407 Northlake, TX 76247.