2013 DRINKING WATER QUALITY REPORT

City of Heath, Texas **Consumer Confidence Report 972-771-6228** **July 2014**

Heath Drinking Water is Regulated by Federal (EPA) Drinking Water Requirements

This annual Water Quality Report covers the period of January 1 to December 31, 2013. This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water. The analysis was made using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented herein. We hope this information helps you become more knowledgeable about what is in your drinking water.

The sources of drinking water (both tap water and bottled water) may 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 include:

- 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 TCEQ has completed a Source Water Assessment for all drinking water systems that own their sources. The report 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 source of drinking water used by the City of Heath is Purchased Surface Water from City of Rockwall through North Texas Municipal Water District (NTMWD) Wylie Water Treatment Plant. The water is obtained from the following Reservoirs: Lavon, Texoma, and Jim Chapman. The system from which we purchase our water, NTMWD, received the Source Water Assessment report. For more information on source water assessments and protection efforts at our system, contact NTMWD at 972-442-5405. For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL http://www.tceq.texas.gov/gis/swaview. Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: http://dww.tceq.texas.gov/DWW/. For more information on source water assessments and protection efforts at our system, please contact North Texas Municipal Water District at 972-442-5405.

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; persons 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.

En Español Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (972)-771-6228

ALL Drinking Water May Contain Contaminants

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. These may cause taste, color or odor problems. The presence of these contaminants or types of problems are not necessarily causes for health concerns or health risks. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

This Chart lists the contaminants detected in North Texas Municipal Water District and City of Heath Drinking Water supplied to Member Cities and Customers

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	0	0	0	0	Naturally present in the environment.

NOTE: Reported monthly tests found no fecal coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Regulated Contaminants

Disinfectants and Disinfection By Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	2013	14	14.1 - 14.1	No goal for the total	60	ppb	No	By-product of drinking water chlorination.
Total Trihalomethanes (TThm)	2013	29	28.9 - 28.9	No goal for the total	80	ppb	No	By-product of drinking water chlorination.
Bromate	2013	N/A	N/A	5	10	ppb	N/A	By-product of drinking water ozanation.

NOTE: Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Antimony	2013	Levels lower than detect level	0-0	6	6	ppb	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
Arsenic	2013	1.21	0.00-1.21	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium	2013	0.04	.04-.04	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium	2013	Levels lower than detect level	0 - 0	4	4	ppb	No	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries.
Cadmium	2013	Levels lower than detect level	0 - 0	5	5	ppb	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Chromium	2013	0.96	0.00-0.96	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	2013	0.76	0.36-0.76	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	2013	Levels lower than detect level	0 - 0	2	2	ppb	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland.
Nitrate (measured as Nitrogen)	2013	0.63	0.63	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Nitrate Advisory: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.								
Selenium	2013	3.45	2.83-3.45	50	50	ppb	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Thallium	2013	Levels lower than detect level	0 - 0	0.5	2	ppb	No	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories.
Radioactive Contaminants	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
Beta/photon emitters	4/29/2010	4.4	4.4 - 4.4	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	4/29/2010	Levels lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium	NA	NA	NA	0	5	pCi/L	No	Erosion of natural deposits.
Synthetic organic contaminants including pesticides and herbicides	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
2, 4, 5 - TP (Silvex)	2011	Levels lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2013	Levels lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2013	Levels lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Atrazine	2013	0.4	0.36-0.40	3	3	ppb	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene	2013	Levels lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2013	Levels lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2013	Levels lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2013	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2013	0.74	0 - 0.74	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2013	Levels lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2013	Levels lower than detect level	0 - 0	0	0	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2013	Levels lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2013	Levels lower than detect level	0 - 0	2	2	ppb	No	Residue of banned insecticide.
Ethylene dibromide	2013	Levels lower than detect level	0 - 0	0	50	ppt	No	Discharge from petroleum refineries.
Heptachlor	2013	Levels lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.
Heptachlor epoxide	2013	Levels lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2012	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2013	Levels lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2013	Levels lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2013	Levels lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl [Vydate]	2013	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2013	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Simazine	2013	0.18	0.18-0.18	4	4	ppb	No	Herbicide runoff.
Toxaphene	2013	Levels lower than detect level	0 - 0	0	3	ppb	No	Runoff / leaching from insecticide used on cotton and cattle.

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
1, 1, 1 - Trichloroethane	2013	Levels lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2013	Levels lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2013	Levels lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2013	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile-finishing factories.
1, 2 - Dichloroethane	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
1, 2 - Dichloropropane	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
Benzene	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from chemical plants and other industrial activities.
Chlorobenzene	2013	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2013	Levels lower than detect level	0 - 0	0	700	ppb	No	Discharge from petroleum refineries.
Styrene	2013	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.
Tetrachloroethylene	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2013	Levels lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2013	Levels lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2013	Levels lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2013	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from industrial chemical factories.
o - Dichlorobenzene	2013	Levels lower than detect level	0 - 0	600	600	ppb	No	Discharge from industrial chemical factories.
p - Dichlorobenzene	2013	Levels lower than detect level	0 - 0	75	75	ppb	No	Discharge from industrial chemical factories.
trans - 1, 2 - Dicholoroethylene	2013	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from industrial chemical factories.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.82	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	95.60%	No	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.

Maximum Residual Disinfectant Level

Disinfectant Type	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2013	2.02	0.86	2.18	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2013	<0.10	0	0.12	0.8	0.8	ppm	Disinfectant.
Chlorite	2013	0.47	0.09	0.85	1.0	N/A	ppm	Disinfectant.

Total Organic Carbon

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2013	5.61	4.59-5.61	ppm	Naturally present in the environment.
Drinking Water	2013	4.12	3.16-4.12	ppm	Naturally present in the environment.
Removal Ratio	2013	37.9%	19%-37.9%	% removal *	N/A

NOTE: Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.
* Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

Lead and Copper

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	90th Percentile	MCLG	MCL	Units	Likely Source of Contamination
Lead	2013	1.66	<.1 - 1.66	1.07	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits. Action Level = 15 *No Violation.*
Copper	2013	0.95	.1 - .95	0.403	1.3	1.3	ppm	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. Action Level = 1.3 *No Violation.*

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.

Lead and Copper Rule - The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.

Violation Type	Violation Begin	Violation End	Violation Explanation
Lead Consumer Notice (LCR)	12/30/2013	2013	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Cryptosporidium	2013	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.
Giardia	2013	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.

Note- Taken on treated water samples.

This report was prepared by the City of Heath and mailed to all Heath water customers.
Copies of this report are available at the Public Works Department and on the City of Heath website - www.heathtx.com. For more information regarding this report or to receive additional copies, please contact us at 972-771-6228 or at
City of Heath
200 Laurence Drive
Heath, Texas 75032

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Cryptosporidium	2013	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.
Giardia	2013	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.

Note- Taken on treated water samples.

Unregulated Contaminants

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Chloroform	2013	12.60	12.60	ppb	By-product of drinking water disinfection.
Bromoform	2013	< 1.0	< 1.0	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2013	10.90	10.90	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2013	5.35	5.35	ppb	By-product of drinking water disinfection.

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

Unregulated Contaminant Monitoring Rule 2 (UCMR2)

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
N-nitrosodimethlyamine (NDMA)	2009	0.0023	0 - 0.0023	ppb	By-product of manufacturing process.

NOTE: 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 this report. For additional information and data visit http://www.epa.gov/safewater/ucmr/ucmr2/index.html, or call the Safe Drinking Water Hotline at (800) 426-4791.

Secondary and Other Constituents Not Regulated

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Bicarbonate	2013	102	82-102	ppm	Corrosion of carbonate rocks such as limestone.
Calcium	2013	53.2	50.3-53.2	ppm	Abundant naturally occurring element.
Chloride	2013	36.5	32.9-36.5	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Hardness as Ca/Mg	2013	146	142-146	ppm	Naturally occurring calcium and magnesium.
Iron	2013	Levels lower than detect level	0.00-0.00	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2013	4.07	3.99-4.07	ppm	Abundant naturally occurring element.
Manganese	2013	0.006	0.0011-0.006	ppm	Abundant naturally occurring element.
Nickel	2013	0.01	0.00-0.01	ppm	Erosion of natural deposits.
pH	2013	8.68	7.69-8.68	units	Measure of corrosivity of water.
Sodium	2013	44.4	34.6-44.4	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2013	94	85.3-94	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2013	149	82-149	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2013	317	302-317	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2013	146	142-146	ppm	Naturally occurring calcium.
Zinc	2013	0.01	0.00-0.01	ppm	Moderately abundant naturally occurring element used in the metal industry.

Water Quality Test Results

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

Avg - Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Maximum Contaminant Level (MCL) - The highest level of a contaminant allowed 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 risk to health. 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 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.

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

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

Water Quality Test Results (Continued)

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

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

NTU - nephelometric turbidity units (this is the unit used to measure water turbidity)

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

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

N/A - Not applicable

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

Action Level Goal (ALG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. **ALG**s allow for a margin of safety.

PUBLIC PARTICIPATION OPPORTUNITIES

To request that an item concerning drinking water be placed on a future City Council agenda for public input, please email cityhall@heathtx.com or call the City Secretary at 972-771-6228. There are no public meetings concerning our drinking water currently scheduled. The City Council meets the second and fourth Tuesdays of each month.