2013 Consumer Confidence Report

January 1 to December 31, 2013

(Annual Drinking Water Quality Report)

WHERE DO WE GET OUR DRINKING WATER?

The City of Crandall is a member of the North Texas Municipal Water District (NTMWD) which supplies water to over 35 cities across North Texas. The primary source for Crandall's water is Purchased Surface Water delivered from Lavon Lake and is supplemented by water from Lake Texoma, Jim Chapman Lake, Lake Tawakoni and the East Fork Raw Water Supply Project (Wetland). Crandall's water is treated at the NTMWD facility in Wylie, Texas and is delivered to customers through the city's distribution system. In addition, a Source Water Susceptibility Assessment for your drinking water source (s) 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 source water protection strategies. 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

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 necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please call 972-427-3771.

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 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 advise about drinking water from your physician or health care providers. 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.

OUR DRINKING WATER IS REGULATED

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. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. 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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

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. 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.

COMPLIANCE DEADLINE EXTENSION

The City of Crandall has been has 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, and 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 will begin on April 1, 2014. If you have questions regarding this matter, you may contact Joe Villarreal at 972-427-3771.

P.O. Box 277
110 S Main Street
Crandall, Texas 75114
Phone: 972.427.3771
Fax: 972.472.6601

PRSRT STD
US Postage Paid
Crandall, TX
Permit No. 3

RESIDENT/BOXHOLDER
Crandall, Texas 75114

Effective May 1, 2014 the following Stage 3 water restrictions are in effect:

Residential and business customers of landscaped areas with sprinkler or irrigation system shall be limited to outdoor watering every **first and third week** on the following days:

Address ending in:	Day of the week
1, 3, 5, 7, 9	Tuesday
0, 2, 4, 6, 8	Thursday

For more information regarding this report contact:
Public Works Department at 972-427-3771

- Watering is allowed between 6 PM and 6 AM.
- Foundations and first-year trees and shrubs may be watered up to 2 hours on any day with a handheld or soaker hose before 6 AM and after 6 PM.
- Washing or hosing off paved areas and/or buildings is prohibited.
- Excessive run off or any waste of water is prohibited.

Public Participation Opportunities

Date: Monday, August 4, 2014
Time: 6:30 p.m.
Place: 114 S. Main Street
Phone: 972-427-3771
To learn about future public meetings concerning your drinking water or to request to schedule one, please call City Hall at the number listed above.

En Español

Este informe incluye información importante sobre el potable. Si tiene preguntas o comentarios sobre este informe en español, favor de llamar al teléfono 972-427-3771.

Collection	Type	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Unit of Measure	Source of Contaminant
INORGANIC CONTAMINANTS							
2013	Arsenic	1.21	0.00 - 1.21	10	0	ppb	Erosion of natural deposits; etc.
2013	Barium	0.04	0.04 - 0.04	2	2	ppm	Erosion of natural deposits, etc.
2013	Chromium	0.96	0.00 - 0.96	100	100	ppb	Erosion of natural deposits.
2013	Fluoride	0.76	0.36 - 0.76	4	4	ppm	Water additive promoting strong teeth.
2013	Nitrate	0.308	0.308 - 0.308	10	10	ppm	Runoff from fertilizer.
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.							
2010	Beta/photon emitters	4.4	4.4—4.4	50	0	pCi/L	Decay of natural and man-made deposits.
2013	Selenium	3.45	2.83 - 3.45	50	50	ppb	Erosion of natural deposits.
ORGANIC CONTAMINANTS							
2013	Atrazine	0.4	0.36 - 0.40	3	3	ppb	Runoff from herbicide used on row crops.
2013	Di (2-ethylhexyl) adipate	0.74	0—0.74	400	400	ppb	Discharge from chemical factories.
2013	Simazine	0.18	0.18 - 0.18	4	4	ppb	Herbicide runoff.
DISINFECTANTS AND DISINFECTION BY—PRODUCTS							
2013	Total Haloacetic Acids (HAA5)	15	15.3 - 15.3	60		ppb	By-product of drinking water chlorination.
2013	Total Trihalomethanes (TThm)	54	54.4 - 54.4	80		ppb	Byproduct of drinking water chlorination.

MAXIMUM RESIDUAL DISINFECTANT LEVEL

Collection	Type	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Units	Source of Contaminant
2013	Chlorine Residual (Chloramines)	1.71	1.60	2.06	4.0	<4.0	ppm	Disinfectant used to control microbes.
2013	Chlorine Dioxide	<0.10	0	0.12	0.8	0.8	ppm	Disinfectant
2013	Chlorite	0.47	0.09	0.85	1.0	N/A	ppm	Disinfectant

UNREGULATED CONTAMINANTS

Collection	Type	Result	Unit of Measure	Source of Contaminant
2013	Bromodichloromethane	14.5	ppb	By product of drinking water disinfection.
2013	Bromoform	1.24	ppb	Byproduct of drinking water disinfection.
2013	Chloroform	30.4	ppb	By product of drinking water disinfection.
2013	Dibromochloromethane	8.32	ppb	By product of drinking water disinfection.

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

LEAD AND COPPER

Collection	Type	MCLG	The 90th Percentile	Number of Sites Over Action Level	Action Level	Unit of Measure	Source of Contaminant
9/27/2012	Copper	1.3	0.652	0	1.3	ppm	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
9/27/2012	Lead	0	3.44	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.

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
Follow-Up or Routine Tap M/R (LCR)	10/01/2012	2013	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
Follow-Up or Routine Tap M/R (LCR)	10/01/2013	2013	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

TURBIDITY

	Limit (Treatment Technique)	Level Detected	Possible Source
Highest single measurement	1 NTU	0.82	Soil runoff.
Lowest monthly percentage % meeting limit	0.3 NTU	95.60%	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 parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

TOTAL ORGANIC CARBON

Year	Type Detected	Highest Level Detected	Range of Levels	Unit of Measure	Source of Contaminant
2013	Source Water	5.61	4.59—5.61	ppm	Naturally present in the environment.
2013	Drinking Water	4.12	3.16 - 4.12	ppm	Naturally present in the environment.
2013	Removal Ratio	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.

COLIFORM BACTERIA

Collection	Type	Highest Level Detected	Maximum Level	Total No. of Positive Samples	MCL	Source of Contaminant
2013	Coliform	0	0	0	0	Naturally present in the environment.

SECONDARY AND OTHER CONSTITUENTS NOT REGULATED

Collection	Type	Highest Level Detected	Range of Levels Detected	Unit of Measure	Source of Contaminant
2013	Bicarbonate	102	82 - 102	ppm	Corrosion of carbonate rocks; limestone.
2013	Calcium	53.2	50.3 - 53.2	ppm	Abundant naturally occurring element.
2013	Chloride	36.5	32.9 - 36.5	ppm	Abundant naturally occurring element; used in water purification.
2013	Hardness as Ca/Mg	146	142 - 146	ppm	Naturally occurring calcium and magnesium.
2013	Magnesium	4.07	3.99 - 4.07	ppm	Abundant naturally occurring element.
2013	Manganese	0.006	0.0011 - 0.006	ppm	Abundant naturally occurring element.
2013	Nickel	0.01	0.00 - 0.01	ppm	Erosion of natural deposits.
2013	pH	8.68	7.69 - 8.68	units	Measure of corrosivity of water.
2013	Sodium	44.4	34.6 - 43.4	ppm	Erosion of natural deposits.
2013	Sulfate	94	85.3 - 94	ppm	Naturally occurring.
2013	Total Alkalinity as CaCO3	149	82 - 149	ppm	Naturally occurring soluble mineral salts.
2013	Total Dissolved Solids	317	302 - 317	ppm	Total dissolved mineral constituents in water.
2013	Total Hardness as CaCO3	146	142 - 146	ppm	Naturally occurring calcium.
2013	Zinc	0.01	0.00 - 0.01	ppm	Moderately abundant naturally occurring element used in the metal industry.

DEFINITIONS

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 that is 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 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.

ABBREVIATIONS

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

na: not applicable.

NTU: Nephelometric Turbidity Units (a measure of turbidity)

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

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

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

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

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