

# **Richardson**

**TEXAS** 

# 2 0 1 3 WATER QUALITY R E P O R T

(Consumer Confidence Report)

City of Richardson Water Utilities 1260 Columbia Drive Richardson, Texas 75081

PWS #0570015 (972) 744-4111 (972) 744-5814 (Fax)

## SAFE-HIGH QUALITY-DRINKING WATER-RIGHT FROM YOUR TAP

Richardson Water Utility employees take pride in delivering safe and "superior" quality drinking water to our customers. "Superior," is the rating of our water system by the Texas Commission on Environmental Quality (TCEQ). This rating reflects the hard work and efforts of our employees to protect your health by delivering and maintaining safe and reliable drinking water.

The Water Utilities department is a municipal water distribution and wastewater collection utility owned by the City of Richardson. Wholesale treated water is purchased from the North Texas Municipal Water District (NTMWD) who has surface water rights from Lake Lavon, Lake Chapman, Lake Texoma and Lake Tawakoni.

The pumping and storage system is comprised of five pump stations, seven ground storage tanks and seven elevated storage tanks. The storage capacity is 36.25 million gallons with a pumping capacity of 98.9 million gallons per day. The water distribution system is comprised of 573 miles of water mains with 4,238 fire hydrants and 33,323 metered service connections. Each day, the city tests the water in the distribution system at various points in the city to ensure water is reaching the residents in good condition.

As water travels over the land's surface or through the ground, it dissolves naturally occurring minerals and picks up substances from animal or human activity. Contaminants that may be in untreated water include; organic chemicals from industrial or petroleum use and or radioactive materials. Good watershed management by each of us to keep contaminants out of our lakes and waterways is cheaper and easier than removing them later at the treatment plant. The NTMWD conducts daily tests on the raw water from their sources, water in process and the finished water.

ALL drinking water may contain contaminants. 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 (1-800-426-4791).

The Public Services Department is responsible for your water distribution and infrastructure system maintenance and is part of the City government. The City Council meets on the second and fourth Monday of each month at 7:30 p.m. in the City Hall Council Chambers.

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)\_744 – 4111 para hablar con una persona bilingüe en español

## **2012 Richardson Distribution Samples**



Bacteriological Scheduled	1212
Bacteriological Construction	54
Bacteriological Other	2
Disinfectant Residual Scheduled	1819
Disinfectant Residual Construction	54
Disinfectant Residual Other	1105
Trihalomethanes Samples	12
Haloacetic Acids Samples	12
Lead and Copper Samples (Tri-Annual)	30
Quarterly Distribution Samples	28
Quarterly Entry Point Samples	31

## **Grassy, Earthy Taste and Odor**

The north Texas summer climate normally consists of high temperatures and trace amounts of rainfall. The high temperatures and lack of rainfall creates an ideal environment for algae to bloom in surface water supplies.

Each summer, throughout the months of July and August, lakes and other surface water supplies experience a natural event – an "algal bloom". Algal blooms are common to surface water supplies in warm weather climate states like Texas.

As hot summer temperatures warm the reservoirs, the lack of rainfall lessens the turbidity and allows the sunlight to penetrate the water. With the increase in water temperature and the lack of turbidity, photosynthesis will occur providing the right environment for algae to reproduce or "bloom".

When an algal bloom exists, there is the possibility for a grassy, earthy taste in the treated drinking water supply. This event, although aesthetically undesirable to the public, does not alter the high quality of water provided to the cities and communities for their use.

NTMWD laboratory personnel monitor the raw water quality from Lake Lavon prior to its treatment. One of the many analyses performed is an algal count. Laboratory personnel, through this daily activity, can determine the onset of an algal bloom.

The blue green algae species Nostoc and Anabaena, as it reproduces or "blooms", produces an oily organic substance. It is this organic substance that is responsible for the change in taste and odor of the treated drinking water.

NTMWD uses several steps to control the taste and odor produced. To reduce the unpleasant taste levels, activated carbon is used as an absorption media. Potassium permanganate is added as an oxidizing agent to reduce the odor associated with an algal bloom. Both of these chemicals are removed during the treatment process prior to its delivery to the cities.

Chlorine is used throughout the treatment process as a strong disinfectant. Chlorine also aids in odor reduction during times of algal blooms.

The quality of water remains high as regulated by the Texas Commission on Environmental Quality (TCEQ) and Environmental Protection Agency (EPA) standards. The treated water remains safe for human consumption with no health risks created by the "algal blooms".

## Cryptosporidium

Cryptosporidium is a microscopic parasite affecting the digestive tracts of humans and animal. It is shed in feces and when ingested, may result in diarrhea, cramps, fever and other gastrointestinal symptoms. Outbreaks have been most commonly associated with person - to - person (day care center) and waterborne (drinking and recreational water) spread of the parasite. Foodborne and animal- (especially calves) to-person spread has also been documented.

No specific drug therapy has proven to be effective, but people with healthy immune systems will usually recover within two weeks. Individuals with weak immune systems, however, may be unable to clear the parasite and suffer chronic and debilitating illness.

The NTMWD tests for Cryptosporidium in both the raw lake water and the treated water.

## Special information for people with weakened immune systems –

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; those 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.

## **Source Water Assessment Study**

The TCEQ has completed an assessment of The North Texas Municipal Water Districts source water and results indicate that some of their sources are susceptible to certain constituents. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detection of these constituents will be found in the Consumer Confidence Report. For more information on source water assessments and protection efforts in their system, contact NTMWD's public information office for an appointment.

## **Mandatory Language for Compliance Deadline Extensions**

CITY OF RICHARDSON 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 11, 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.

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 Richard Boston at 972-744-4111

Posted /Delivered on: May 2012

## **Water Conservation**

Every customer can help reduce water consumption in and around your home. Here are some easy ways to reduce the amount of water you use.

- Water trees and shrubs, which have deep root systems, longer and less frequently than shallow-rooted plants which require smaller amounts of water more often.
- Water the lawn or garden during the coolest part of the day (early morning before 10:00 am and after 6:00 pm or later is best). Do not water on windy days.
- Set sprinklers to water the lawn or garden only not the street or sidewalk.
- If water runs off your lawn easily, split your watering time into shorter periods to allow for better absorption.
- Spreading a layer of organic mulch around plants retains moisture and saves water, time and money.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Add food wastes to a compost pile instead of using the garbage disposal and save gallons every time.
- Shorten your shower by a minute or two and you'll save up to 150 gallons per month.
- Do not let the water run while shaving or brushing teeth.
- A leaky toilet can waste 200 gallons per day. To detect leaks in the toilet, add food coloring to the tank water. If you see the same coloring in the bowl, it is leaking.

This chart lists contaminates in Richardson drinking water. Numerous other contaminates were not detected. For additional information, please contact the **Richardson Water Utility at 972-744-4111** 

C. L. d. v. v. / SV. v. v.	D	Highest Level	MCI	MCLC	\$7'-1-4'	D. 21. C.	
Substance / Year Range Detected MCL MCLG Violation Possible Source  Regulated at the Treatment Plant							
		I I	uiaicu ai i			Discharge from petroleum refineries; fire	
Antimony (ppb) (2012)	0.195 – 0.256	0.256	6	6	No	retardants; ceramics; electronics; solder; and test addition.	
Arsenic (ppb) (2012)	0.951 – 1.1	1.1	10	0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	
Barium (ppm) (2012)	.03640389	0.0389	2	2	No	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries	
Beryllium (ppb) (2012)	0 - 0	Levels lower than detect level	4	4	No	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries.	
Cadmium (ppb) (2012)	0-0	Levels lower than detect level	5	5	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.	
Chromium (ppb) (2012)	2.35 – 2.55	2.55	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits.	
Fluoride (ppm )(2012)	0.50 – 0.66	0.66	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	
Mercury (ppb) (2012)	0-0	Levels lower than detect level	2	2	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland.	
Nitrate (ppm) (2012) (measured as Nitrogen)	0.08 - 1.04	1.04	10	10	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.	
Nitrate Advisory: Nitrate in dri cause blue baby syndrome. Nitrat		levels above 10 ppm	is a health ris	k for infants of	less than six mo	onths of age. High nitrate levels in drinking water can	
Selenium (ppb) (2012)	0.232 - 0.244	0.244	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.	
Thallium (ppb) (2012)	0-0	Levels lower than detect level	2	0.5	No	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories.	
Cryptosporidia and Giardia (0o) cysts/L	ND - ND	ND - ND	TT	0	No	Human and animal fecal waste	
Radioactive Contaminants							
Beta/photon emitters (pCi/L) (4/29/2010)	4.4 – 4.4	4.4	50	0	No	Decay of natural & man-made deposits	
Gross alpha excluding radon and uranium (pCi/L) (4/29/2010)	0-0	Levels lower than detect level	15	0	No	Erosion of natural deposits.	
Substance	Range	Highest Level Detected	MRDL	MRDLG			
Chlorine Dioxide (ppm) (2012)	0-0.1	0.1	0.80	0.80	Disinfectan	t	

Substance / Year	Range	Highest Level Detected	MCL	MCLG	Violation	Possible Source	
Synthetic organic contaminants including pesticides and herbicides							
2, 4, 5 - TP (Silvex) (ppb) (2011)	0-0	Levels lower than detect level	50	50	No	Residue of banned herbicide.	
2, 4 – D (ppb) (2011)	0-0	Levels lower than detect level	70	70	No	Runoff from herbicide used on row crops.	
Alachlor (ppb) (2012)	0-0	Levels lower than detect level	2	0	No	Runoff from herbicide used on row crops.	
Atrazine (ppb) (2012)	0 - 0.71	0.71	3	3	No	Runoff from herbicide used on row crops	
Benzo (a) pyrene (ppt) (2012)	0-0	Levels lower than detect level	200	0	No	Leaching from linings of water storage tanks and distribution lines.	
Carbofuran (ppb) (2011)	0-0	Levels lower than detect level Levels lower	40	40	No	Leaching of soil fumigant used on rice and alfalfa.	
Chlordane (ppb) (2012)	0 - 0	than detect level	2	0	No	Residue of banned termiticide.	
Dalapon (ppb) (2011)	0-0	Levels lower than detect level	200	200	No	Runoff from herbicide used on rights of way.	
Di(2-ethylhexyl)adipate (ppb) (2012)	0 - 0.74	0.74	400	400	No	Discharge from chemical factories	
Di (2-ethylhexyl) phthalate (ppb) (2012)	0-0	Levels lower than detect level	6	0	No	Discharge from rubber and chemical factories.	
Dibromochloropropane (DBCP) (ppt) (2011)	0-0	Levels lower than detect level	0	0	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.	
Dinoseb (ppb) (2011)	0-0	Levels lower than detect level	7	7	No	Runoff from herbicide used on soybeans and vegetables.	
Endrin (ppb) (2012)	0-0	Levels lower than detect level	2	2	No	Residue of banned insecticide.	
Ethylene dibromide (ppt) (2011)	0-0	Levels lower than detect level	50	0	No	Discharge from petroleum refineries.	
Heptachlor (ppt) (2012)	0-0	Levels lower than detect level	400	0	No	Residue of banned termiticide.	
Heptachlor epoxide (ppt) (2012)	0-0	Levels lower than detect level	200	0	No	Breakdown of heptachlor.	
Hexachlorobenzene (ppb) (2012)	0-0	Levels lower than detect level	1	0	No	Discharge from metal refineries and agricultural chemical factories.	
Hexachlorocyclopentadiene (ppb) (2012)	0-0	Levels lower than detect level	50	50	No	Discharge from chemical factories.	
Lindane (ppt) (2012)	0-0	Levels lower than detect level	200	200	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.	
Methoxychlor (ppb) (2012)	0-0	Levels lower than detect level	40	40	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.	
Oxamyl [Vydate] (ppb) (2011)	0-0	Levels lower than detect level	200	200	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.	
Pentachlorophenol (ppb) (2012)	0-0	Levels lower than detect level	1	0	No	Discharge from wood preserving factories.	
Simazine (ppb) (2012)	0.11 - 0.38	0.38	4	4	No	Herbicide runoff	
Toxaphene (ppb) (2012)	0-0	Levels lower than detect level	3	0	No	Runoff / leaching from insecticide used on cotton and cattle.	

Turbidity							
	Limit (Treatment Technique)	Level Detected	Violation	Possible Source			
Highest single measurement	1 NTU	0.62 NTU	No	Soil runoff			
Lowest monthly percentage (%) meeting limit	0.3 NTU	98.16%	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.

		Highest Level				
Substance / Year	Range	Detected	MCL	MCLG	Violation	Possible Source
Volatile Organic Contamina	nts					
1, 1, 1 – Trichloroethane		Levels lower				Discharge from metal degreasing sites and other
(ppb) (2012)	0 - 0	than detect level	200	200	No	factories.
1, 1, 2 – Trichloroethane		Levels lower				
(ppb) (2012)	0 - 0	than detect level	5	3	No	Discharge from industrial chemical factories.
1, 1 – Dichloroethylene		Levels lower				
(ppb) (2012)	0 - 0	than detect level	7	7	No	Discharge from industrial chemical factories.
1, 2, 4 – Trichlorobenzene	0 0	Levels lower	70	70	3.7	
(ppb) (2012)	0 - 0	than detect level	70	70	No	Discharge from textile-finishing factories.
1, 2 – Dichloroethane (ppb)	0 0	Levels lower	~			
(2012)	0-0	than detect level	5	0	No	Discharge from industrial chemical factories.
1, 2 – Dichloropropane (ppb) (2012)	0 - 0	Levels lower	5	0	No	Discharge from industrial chemical factories.
(ppu) (2012)	0-0	than detect level	3	U	110	Discharge from factories; leaching from gas storage
Benzene (ppb) (2012)	0 - 0	Levels lower than detect level	5	0	No	tanks and landfills.
Carbon Tetrachloride (ppb)	0-0		3	U	NO	Discharge from chemical plants and other industrial
(2012)	0 - 0	Levels lower than detect level	5	0	No	activities.
Chlorobenzene (ppb)	0 0	Levels lower		0	110	Discharge from chemical and agricultural chemical
(2011)	0 - 0	than detect level	100	100	No	factories.
Dichloromethane (ppb)	0 0	Levels lower	100	100	110	Tuetories.
(2012)	0 - 0	than detect level	5	0	No	Discharge from pharmaceutical and chemical factories.
		Levels lower				T T
Ethylbenzene (ppb) (2012)	0 - 0	than detect level	700	0	No	Discharge from petroleum refineries.
		Levels lower				Discharge from rubber and plastic factories; leaching
Styrene (ppb) (2012)	0 - 0	than detect level	100	100	No	from landfills.
Tetrachloroethylene (ppb)		Levels lower				
(2012)	0 - 0	than detect level	5	0	No	Discharge from factories and dry cleaners.
Toluene (ppm) (2012)	0 - 0	Levels lower	1	1	No	Discharge from petroleum factories.
Trichloroethylene (ppb)	0-0	than detect level	1	1	NO	Discharge from metal degreasing sites and other
(2012)	0 - 0	Levels lower than detect level	5	0	No	factories.
Vinyl Chloride (ppb)	0 0	Levels lower		0	110	Leaching from PVC piping; discharge from plastics
(2012)	0 - 0	than detect level	2	0	No	factories.
(=/		Levels lower				Discharge from petroleum factories; discharge from
Xylenes (ppm) (2012)	0 - 0	than detect level	10	10	No	chemical factories.
cis - 1, 2– Dichloroethylene		Levels lower				
(ppb) (2012)	0 - 0	than detect level	70	70	No	Discharge from industrial chemical factories.
o – Dichlorobenzene (ppb)		Levels lower				
(2012)	0 - 0	than detect level	600	600	No	Discharge from industrial chemical factories.
p – Dichlorobenzene (ppb)	<u> </u>	Levels lower				
(2012)	0 - 0	than detect level	75	75	No	Discharge from industrial chemical factories.
trans - 1, 2-						
Dicholoroethylene (ppb)		Levels lower			_	
(2012)	0 - 0	than detect level	100	100	No	Discharge from industrial chemical factories.

Regulated at the Customer's Tap							
Substance / Year	Range	Highest Average Sample Point	MCL	MCLG	Possible Source		
					Corrosion of customer plumbing.		
Lead (ppm) (2012)	0.0004 - 0.00455	0.0038	0.015	0.015	Action Level= .015		
					Corrosion of customer plumbing.		
Copper (ppm) (2012)	0.274 - 0.898	0.855	1.3	1.3	Action Level= 1.3		

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. This water supply 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 at (800) 426-4791 or at http://www.epa.gov/safewater/lead.

Regulated in the Distribution System						
		Highest				
		Average				
Substance / Year	Range	Sample Point	MCL	MCLG	Possible Source	
Total Coliform (%) (2012)	0.0 - 0.0	0%	5	0	Naturally present in the environment	

Total coliform bacteria are used as indicators of microbial contamination of drinking water. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are hardier than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Fecal Coliform REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

Chlorine Residual (Chlorite) (2012)	0.08 - 0.81	0.81	1.0	1.0	Disinfectant
Total HAA (ppb) (2012)	16.4 - 35.2	27.9	60	N/A	By-Product of drinking water disinfection
Total THMs (ppb) (2012)	27.8 - 50.8	38.9	80	N/A	By-Product of drinking water disinfection
Chlorine Residual (Chloramines)					
(ppm) (2012)	0.7 - 3.9	3.37	4	4	Disinfectant used to control microbes

Secondary And Other Constituents Not Regulated						
Substance	Range	Highest Level Detected	Possible Source			
Bicarbonate (ppm) (2011)	73 – 120	120	Corrosion of carbonate rocks such as limestone			
Calcium (ppm) (2012)	39.9 – 47.5	47.5	Abundant naturally occurring element			
Chloride (ppm) (2012)	22.8 – 26	26	Abundant naturally occurring element; used in water purification; by-product of oil field activity			
Hardness as Ca/Mg (ppm) (2012)	114 – 133	133	Naturally occurring calcium and magnesium			
Iron (ppm) (2012)	0.00 - 0.00	Levels lower than detect level	Erosion of natural deposits; iron or steel water delivery equipment or facilities			
Magnesium (ppm) (2012)	3.5 - 3.54	3.54	Abundant naturally occurring element			
Manganese (ppm) (2012)	.00052500125	0.00125	Abundant naturally occurring element			
Nickel (ppm) (2012)	.0056300609	0.00609	Erosion of natural deposits			
pH (units) (2012)	7.7 - 8.0	8.0	Measure of corrosivity of water			
Sodium (ppm) (2012)	27.2 – 30.6	30.6	Erosion of natural deposits; by-product of oil field activity			
Sulfate (ppm) (2012)	59.9 – 75.7	75.7	Naturally occurring; common industrial by-product; by-product of oil field activity			
Total Alkalinity as CaCO3 (ppm) (2012)	74 – 92	92	Naturally occurring soluble mineral salts			
Total Dissolved Solids (ppm) (2012)	229 – 264	264	Total dissolved mineral constituents in water			
Total Hardness as CaCO3 (ppm) (2012)	114 – 133	133	Naturally occurring calcium			
Zinc (ppm) (2012)	.00087400617	0.00617	Moderately abundant naturally occurring element used in the metal industry			
Bromodichloromethane (ppb) (2012)	10.2 – 17.8	13.70	By-Product of drinking water disinfection			
Chloroform (ppb) (2012)	11.6 – 22.1	18.03	By-Product of drinking water disinfection			
Dibromochloromethane (ppb) (2012)	4.2 – 9.8	6.85	By-Product of drinking water disinfection			
Bromoform (ppb) (2012)	< 1.0 – 1.1	1.10	By-Product of drinking water disinfection			

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 <a href="http://www.epa.gov/safewater/ucmr/ucmr2/index.html">http://www.epa.gov/safewater/ucmr/ucmr2/index.html</a>, or call the Safe Drinking Water Hotline at (800) 426-4791.

## **Total Organic Carbon**

TOC Source Water (ppm) (2012)	4.22 – 4.94	4.94	Naturally present in the environment
TOC Drinking Water (ppm) (2012)	2.95 – 4.16	4.16	Naturally present in the environment
TOC Removal Ratio (% of removal) (2012)	14% - 39.4%	39.4%	

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.

<sup>\*</sup> Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

#### **Definitions and Measurements**

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to maximum contaminant level goals 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.

(ppm) - Parts per million. One part per million equals one packet of artificial sweetener sprinkled into 250 gallons of iced tea.

(ppb) - Parts per billion. One part per billion is equal to one packet of artificial sweetener sprinkled into an Olympic-size swimming pool.

(ppt) - Parts per trillion, or nanograms per liter (ng/L)

(pCi/L) - Picocuries per liter is a measure of radioactivity in water. A picocurie is 10 to the minus 12 curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

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

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 contaminants.

Action Level - The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement a water system must follow.

NTU - Nephelometric Turbidity Units (this is the unit used to measure water turbidity)

ND - Not Detected

2012 data analyses from most recent testing done in accordance with the regulations

### **Richardson City Council**

Place 1 Bob Townsend (Mayor)

Place 2 Mark Solomon

Place 3 Scott Dunn

Place 4 Laura Maczka (Mayor Pro Tem)

Place 5 Kendal Hartley

Place 6 Steve Mitchell

Place 7 Amir Omar

The Public Services Department is responsible for your water distribution and infrastructure system maintenance and is part of the City government. The City Council meets on the second and fourth Monday of each month at 7:30 p.m. in the City Hall Council Chambers.

#### **Important Communication Links:**

#### Maintenance/Emergency Service (24 hours/day, 7 days/week)

(972) 744-4111

Water Utilities Administration (8:00 am – 5:00 p.m., Mon.-Fri)

(972) 744-4407

**Customer Service Billing Information** 

(972) 744-4120

#### **Mailing addresses:**

Richardson Water Utilities

P.O. Box 830309

Richardson, Texas 75083

## Web Pages:

City of Richardson – <a href="http://www.cor.net/">http://www.cor.net/</a>

American Water Works Association - <a href="http://www.awwa.org/">http://www.awwa.org/</a>

Texas Water Utilities Association - <a href="http://www.twua.org/">http://www.twua.org/</a>

 $TCEQ - \underline{http://www.tceq.state.tx.us/}$ 

USEPA - http://www.epa.gov/

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)  $_2$ 744  $_2$ 4111 para hablar con una persona bilingüe en español

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