



# 2013 ANNUAL DRINKING WATER QUALITY REPORT

(Consumer Confidence Report)  
City of Sachse PWS TX0570057  
972.495.7600



## Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

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. We hope the information helps you become more knowledgeable about your drinking water.

**Water Sources:** The sources of drinking water (both tap and bottled) 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 before treatment include: microbes, pesticides, herbicides, inorganic contaminants, organic chemical contaminants and radioactive contaminants.

**Water Taste and Odor:** An occurrence that may also affect the taste and odor of our water results from extended hot weather periods that cause lake algae to reproduce or "bloom", emitting an oily, organic substance. Oily taste and odor in the water are aesthetic and do not present health-related concerns. In an attempt to reduce the organic residue, the NTMWD will take additional steps in the treatment process. Although water may, on occasion, have an unpleasant taste or odor, it is still perfectly safe to drink.

**Public Participation:** Currently, there are no public meetings scheduled that concern our drinking water. City Council meets the first and third Mondays of the month. To request an item regarding our drinking water be placed on a future agenda for public participation, please call 972.495.7600.

**Information Included in this Report:** The U.S. EPA requires water systems to test for up to 97 contaminants. The following pages list all of the regulated or monitored contaminants which have been found in our drinking water.

## Where Does Sachse Get Its Drinking Water?

Our drinking water is obtained from LAKE LAVON, a surface water source, through North Texas Municipal Water District (NTMWD). Sachse purchases the water from NTMWD and pipes it to our residents. The TCEQ has completed a Source Water Assessment for all drinking water systems. This 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. NTMWD received the following assessment report from TCEQ. For more information on source water assessments and protection efforts at our system, please contact the North Texas Municipal Water District (NTMWD) or the City of Sachse. In the water loss audit submitted to the Texas Water Development Board for the time period of Jan.-Dec.2013, our system lost an estimated 207,848,000 gallons of water. If you have any questions about the water loss audit, please call 972-495-7600.

## ALL Drinking Water May Contain Contaminants

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: 800.426.4791.

## 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, and are not cause for health concerns. Although we do report secondary constituents in this report, it is not required. Unless otherwise noted, all samples were collected and tested in 2013.

## Health Information for Special Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those undergoing chemotherapy for cancer, those who have undergone organ transplants, those who are undergoing treatment with steroids, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk to infections. These people should seek advice about drinking water from their 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.

**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 City of Sachse 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>.

## En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en Español, favor de llamar al tel. 972.495.7600 – para hablar con una persona bilingue en Español.

**Inorganic Contaminants**

Contaminants	Units	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Arsenic	ppb	1.21	0.00-1.21	0	10	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production waste.
Barium	ppm	0.04	0.04-0.04	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	ppb	0.96	0.00-0.96	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	ppm	0.76	0.36-0.76	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	ppm	0.8	0.56-0.80	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
<b>Nitrate Advisory:</b> 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	ppb	3.45	2.83-3.45	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.

**Turbidity**

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.82 NTU	No	Soil runoff.
Lowest monthly percentage	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 including bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

**Organic Contaminants**

Synthetic organic contaminants including pesticides and herbicides	Units	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Atrazine	ppb	0.4	0.36-0.40	3	3	No	Runoff from herbicide used on row crops.
Di (2-ethylhexyl) adipate	ppb	0.74	0-0.74	400	400	No	Discharge from chemical factories.
Simazine	ppb	0.18	0.18-0.18	4	4	No	Herbicide runoff.

**Maximum Residual Disinfectant Level**

Disinfectant Type	Units	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Source of Chemical
Chlorine Residual (Chloramines)	ppm	2.4	0.5	4.4	4.0	< 4.0	Disinfectant used to control microbes.
Chlorine Dioxide	ppm	<0.10	0	0.12	0.8	0.8	Disinfectant.
Chlorite	ppm	0.47	0.09	0.85	1.0	N/A	Disinfectant.

**Disinfection Byproducts**

Disinfectants and Disinfection Byproducts	Units	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	ppb	23	13.9-23	No goal for the total	60	No	Byproduct of drinking water chlorination.
Total Trihalomethanes (TTHm)	ppb	41.9	25.4-41.9	No goal for the total	80	No	Byproduct of drinking water chlorination.

**Unregulated Contaminants**

Contaminants	Units	Highest Level Detected	Range of Levels Detected	Likely Source of Contamination
Chloroform	ppb	15.5	8.3-15.5	Byproduct of drinking water disinfection.
Bromoform	ppb	1.54	1.0-1.54	Byproduct of drinking water disinfection.
Bromodichloromethane	ppb	15	9.4-15	Byproduct of drinking water disinfection.
Dibromochloromethane	ppb	9.91	6.4-9.91	Byproduct of drinking water disinfection.

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

Unregulated contaminants are those which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection by-products. There is no maximum contaminant level for these chemicals at the entry point to distribution.

**Lead and Copper** *See front page for "Additional Health Information for Lead"*

Contaminants	Units	90 <sup>th</sup> Percentile	Number of Sites Exceeding Action Level	Action Level	Likely Source of Contamination
Lead	ppb	2.51	0	15	Corrosion of customer plumbing
Copper	ppm	0.313	0	1.3	Byproduct of drinking water disinfection.

**Radioactive Contaminants**

Radioactive Contaminants	Units	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Beta/positron emitters	pCi/L	4/29/2010	4.4	4.4-4.4	0	50	No	Decay of natural and man-made deposits.

**Total Organic Carbon (TOC)**

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

**NOTE:** TOC has no health effects. The disinfectant can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (THMs) and haloacetic acids (HAAs) 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.

**Total Coliform**

Total Coliform Maximum Contaminant Level	Unit of Measure	Highest Number of Positive	Violation	Likely Source of Contamination
Two or more coliform positive samples in any single month	Presence	0	No	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.

**Secondary and Other Constituents Not Regulated** *(No associated adverse health effects)*

Contaminants	Units	Collection Date	Highest Level Detected	Range of Levels Detected	Likely Source of Contamination
Bicarbonate	ppm	2013	102	82-102	Corrosion of carbonate rocks such as limestone.
Calcium	ppm	2013	53.2	50.3-53.2	Abundant naturally occurring element.
Chloride	ppm	2013	36.5	32.9-36.5	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
Hardness as Ca/Mg	ppm	2013	146	142-146	Naturally occurring calcium and magnesium.
Iron	ppm	2013	Levels lower than detect level	0.00-0.00	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	ppm	2013	4.07	3.99-4.07	Abundant naturally occurring element.
Manganese	ppm	2013	0.006	0.0011-0.006	Abundant naturally occurring element.
Nickel	ppm	2013	0.01	0.00-0.01	Erosion of natural deposits.
pH	units	2013	8.68	7.69-8.68	Measure of corrosivity of water.
Sodium	ppm	2013	44.4	34.6-44.4	Erosion of natural deposits; byproduct of oil field activity.
Sulfate	ppm	2013	94	85.3-94	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
Total Alkalinity as CaCO <sub>3</sub>	ppm	2013	149	82-149	Naturally occurring soluble mineral salts.
Total Dissolved Solids	ppm	2013	317	302-317	Total dissolved mineral constituents in water.
Total Hardness as CaCO <sub>3</sub>	ppm	2013	146	142-146	Naturally occurring calcium.
Zinc	ppm	2013	0.01	0.00-0.01	Moderately abundant naturally occurring element used in the metal industry.

**Table Definitions**

**Action Level (AL)** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which 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.

**NA** Not Applicable; **ND** Not Detected

**NTU** (Nephelometric Turbidity Units) A unit used when measuring turbidity, a measure of the cloudiness of the water.

**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.

**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.

**pCi/L** (picocuries per Liter) A measure of radioactivity in the water.

**ppb** (parts/ billion) A unit of measurement roughly = to 1 drop in 100,000 gallons.

**ppm** (parts/ million) A unit of measurement roughly = to 1 drop in 100 gallons.

## Watering Restrictions Effective April 1, 2014

Effective April 1, 2014, Sachse enforces the following watering restrictions per NTMWD. As the months of June, July and August are traditionally the hottest and driest of the year, it is important to continue conservation efforts and efficient use of our water supply.

Watering is allowed ONLY once every two weeks on the day your recycle is picked up. If your recycle is picked up every other Thursday, you may ONLY water every other Thursday.

Commercial areas and Homeowners Associations' common areas may water ONLY on the 1st and 15th of the month.

Foundations, new landscaping, new plantings (first year) of shrubs and trees may be watered for up to two hours per day by a handheld hose, a soaker hose, or a dedicated zone using a drip irrigation system.

Hosing of paved areas, buildings, or windows, washing or rinsing of vehicles by hose except with a hose-end cutoff nozzle or allowing water to runoff is prohibited.

NTMWD will evaluate the watering restrictions on a month to month basis. Please visit the city's website for the latest watering restrictions.



## DROUGHT TOLERANT PLANTINGS

When selecting your landscape plantings, think native plants. Check local nurseries or search online to get tips on drought-tolerant grass, trees, and shrubs for your landscape.

**Grasses:** Buffalo grass and Bermuda grass both have high drought tolerance levels.

**Trees:** Pecan, Texas Redbud, Live Oak, Crape Myrtle and Yaupon Holly are all good choices in drought conditions.

**Shrubs:** Lantana, Texas Sage, Indian Hawthorn, Vitex and Viburnum add color and life to any drought-tolerant landscape.

**Don't forget to mulch!** Maintain a 2" to 4" layer in all beds and containers. Mulch keeps the soil moist, moderates soil temperature, slows evaporation, and breaks down into nutrients for the plants.

## An Efficient Watering Schedule

The key to watering lawns is to apply water infrequently, yet thoroughly. This creates a deep, well-rooted lawn that efficiently uses the water that is stored in the soil.

~ During designated watering times, water enough to wet the soil thoroughly.

~ Prevent water run-off! Check system for efficiency.

~ Don't overwater. A properly designed landscape needs only 1" of water per week. If you water too much you may damage the landscape by supporting a shallow root system.

Water conservation tips for both indoors and outdoors, Texas Smartscape, and Texas Urban Landscape Guide can be found online.



## Storm Water Management Program

Sachse's Storm Water Management Program lists Best Management Practices (BMPs) implemented by the City in order to reduce pollutants in our storm water system. We depend on good water quality, and ensuring good water quality starts with you. There are many ways you can help reduce storm water pollution. Never put anything in a storm drain; scoop your pet's waste; minimize fertilizer, herbicide and pesticide use; don't litter; check your car for leaks and recycle used motor oil; and compost or collect yard clippings for pick up. Consider the benefits on our local waterways if everyone took these few simple steps.

Report storm water pollution or dumping of trash, yard wastes, or other pollutants into storm water drains by calling *Billy Ho* at 469.429.4788.

## Rainwater Harvesting

Rainwater harvesting offers an effective way to conserve water. An easy way to harvest rainwater is by directing a gutter downspout into a barrel and using the collected water in gardens or on potted plants. Rainwater does not contain hard minerals and is better for your plants.



Other incentives for using rainwater harvesting is the reduction of utility bills (after all, the rainwater is free) and it helps reduce flow to storm water drains, reducing stream pollution. Easy instructions for constructing a rain barrel can be found on the TCEQ website.

## Conducting an Irrigation System Checkup



A major problem with most irrigation systems is poor distribution and maintenance. Items to consider:

- ~ Nozzles - Use water-conserving, multi-stream nozzles that apply water in heavier droplets, so less water is lost due to displacement by wind and evaporation. Make sure sprinkler heads spray the landscape and not the driveway or sidewalks.

- ~ Controller - Replace old controllers with new models that offer water conserving settings. Also available, a smart controller which uses moisture sensors to determine runtime.

- ~ Rain / Freeze Sensor - Prevents an automatic system from applying water when it is raining or during freezing conditions. Avoids loss of water and prevents hazardous icy conditions.

- ~ Drip Irrigation - Drip irrigation is 90% efficient compared to spray irrigation which is about 65% efficient. In some cases, drip irrigation is exempt from drought restrictions. Many existing irrigation systems can be converted to drip irrigation. Drip irrigation tubing is available for do-it-yourselfers who want to convert to a drip irrigation system.

The City of Sachse contracts with North Texas Municipal Water District (NTMWD) for water supplied to its citizens.

The primary concern and responsibility of the NTMWD is the conservation and preservation of safe, clean, high-quality drinking water, a concern shared by the City of Sachse. If you would like more information about the quality of water, contaminants in drinking water, and/or potential health effects, please contact Sachse Public Works at 972.495.7600, the NTMWD's Public Information Office at 972.442.5405, or the Texas Commission on Environmental Quality Safe Drinking Water Hotline at 1.800.426.4791.

**Sachse Public Works Department, 6420 Sachse Road, Sachse, Texas, 75048; [www.cityofsachse.com](http://www.cityofsachse.com)**

