

2011 Annual Drinking

Water Quality Report

(Consumer Confidence Report)

CITY OF TOMBALL

Phone Number (281) 290-1400

SPECIAL NOTICE

Required language for ALL community public water supplies:

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.

Public Participation Opportunities

Date: 1st & 3rd Monday of every month

Time: 7:00 p.m.

Location: City Hall, 401 Market Street

Phone: Number :(281) 351-5484

To learn about future public meetings (concerning your drinking water), or to request to schedule one, please call us.

OUR DRINKING WATER IS REGULATED

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Source 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.

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. (281)351 -5484 para hablar con una persona bilingüe en español.

Where do we get our drinking water?

The source of drinking water used by CITY OF TOMBALL is Ground Water

A Source Water Susceptibility Assessment for your drinking water sources(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. Some of this source water assessment information is available on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>.

For more information on source water assessments and protection efforts at our system, please contact us.

ALL drinking water may contain contaminants

When drinking water meets federal standards there may not be any health 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 (1-800-426-4791).

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. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Required 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. 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 or at <http://www.epa.gov/safewater/lead>.

Abbreviations

- NTU - Nephelometric Turbidity Units
- MFL - million fibers per liter (a measure of asbestos)
- pCi/L - picocuries per liter (a measure of radioactivity)
- ppm - parts per million, or milligrams per liter (mg/L)
- ppb - parts per billion, or micrograms per liter
- ppt - parts per trillion, or nanograms per liter
- ppq - parts per quadrillion, or picograms per liter

Definitions

Maximum Contaminant Level Goal or 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 or 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 residual disinfectant level goal or 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.
Maximum residual disinfectant level or 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.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
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.
na:	not applicable.
Definitions:	The following tables contain scientific terms and measures, some of which may require explanation.

2011 Regulated Contaminants Detected

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.	There were no TCR detections for this system in this CCR period		0	N	Naturally present in the environment.

Lead and Copper

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

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

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	08/04/2011	1.3	1.3	0.328	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	08/04/2011	0	15	1.32	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)*	2011	1	0 - 1	No goal for the total	60	ppb	N	By-product of drinking water chlorination.

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

Total Trihalomethanes (TThm)*	2011	5	0 - 9.5	No goal for the total	80	ppb	N	By-product of drinking water chlorination.
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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	2011	Levels lower than detect level	0 - 0	6	6	ppb	N	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
Arsenic	2011	2.8	0 - 2.8	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2011	0.333	0.135 - 0.333	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Beryllium	2011	Levels lower than detect level	0 - 0	4	4	ppb	N	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries.
Cadmium	2011	Levels lower than detect level	0 - 0	5	5	ppb	N	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints.
Chromium	2011	Levels lower than detect level	0 - 0	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride	2011	0.89	0.37 - 0.89	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.

Mercury	2011	Levels lower than detect level	0 - 0	2	2	ppb	N	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.
Nitrate [measured as Nitrogen]	2011	0.41	0 - 0.41	10	10	ppm	N	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.

Nitrite [measured as Nitrogen]	08/24/2006	Levels lower than detect level	0 - 0	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2011	Levels lower than detect level	0 - 0	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Thallium	2011	Levels lower than detect level	0 - 0	0.5	2	ppb	N	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	2011	Levels lower than detect level	0 - 0	0	4	mrem/yr	N	Decay of natural and man-made deposits.
Combined Radium 226/228	2011	2.8	2.8 - 2.8	0	5	pCi/L	N	Erosion of natural deposits.
Gross alpha excluding radon and uranium	2011	2.8	2.8 - 2.8	0	15	pCi/L	N	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	N	Residue of banned herbicide.
2,4-D	2011	Levels lower than detect level	0 - 0	70	70	ppb	N	Runoff from herbicide used on row crops.

Alachlor	2011	Levels lower than detect level	0 - 0	0	2	ppb	N	Runoff from herbicide used on row crops.
Atrazine	2011	Levels lower than detect level	0 - 0	3	3	ppb	N	Runoff from herbicide used on row crops.
Benzo(a)pyrene	2011	Levels lower than detect level	0 - 0	0	200	ppt	N	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2011	Levels lower than detect level	0 - 0	40	40	ppb	N	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2011	Levels lower than detect level	0 - 0	0	2	ppb	N	Residue of banned termiticide.
Dalapon	2011	Levels lower than detect level	0 - 0	200	200	ppb	N	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2011	Levels lower than detect level	0 - 0	400	400	ppb	N	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2011	Levels lower than detect level	0 - 0	0	6	ppb	N	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2011	Levels lower than detect level	0 - 0	0	0	ppt	N	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2011	Levels lower than detect level	0 - 0	7	7	ppb	N	Runoff from herbicide used on soybeans and vegetables.
Endrin	2011	Levels lower than detect level	0 - 0	2	2	ppb	N	Residue of banned insecticide.
Ethylene dibromide	2011	Levels lower than detect level	0 - 0	0	50	ppt	N	Discharge from petroleum refineries.
Heptachlor	2011	Levels lower than detect level	0 - 0	0	400	ppt	N	Residue of banned termiticide.
Heptachlor epoxide	2011	Levels lower than detect level	0 - 0	0	200	ppt	N	Breakdown of heptachlor.

Hexachlorobenzene	2011	Levels lower than detect level	0 - 0	0	1	ppb	N	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2011	Levels lower than detect level	0 - 0	50	50	ppb	N	Discharge from chemical factories.
Lindane	2011	Levels lower than detect level	0 - 0	200	200	ppt	N	Runoff/leaching from insecticide used on cattle, lumber, gardens.
Methoxychlor	2011	Levels lower than detect level	0 - 0	40	40	ppb	N	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock.
Oxamyl [Vydate]	2011	Levels lower than detect level	0 - 0	200	200	ppb	N	Runoff/leaching from insecticide used on apples, potatoes and tomatoes.
Pentachlorophenol	2011	Levels lower than detect level	0 - 0	0	1	ppb	N	Discharge from wood preserving factories.
Picloram	2011	Levels lower than detect level	0 - 0	500	500	ppb	N	Herbicide runoff.
Simazine	2011	Levels lower than detect level	0 - 0	4	4	ppb	N	Herbicide runoff.
Toxaphene	2011	Levels lower than detect level	0 - 0	0	3	ppb	N	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	2011	Levels lower than detect level	0 - 0	200	200	ppb	N	Discharge from metal degreasing sites and other factories.
1,1,2-Trichloroethane	2011	Levels lower than detect level	0 - 0	3	5	ppb	N	Discharge from industrial chemical factories.
1,1-Dichloroethylene	2011	Levels lower than detect level	0 - 0	7	7	ppb	N	Discharge from industrial chemical factories.
1,2,4-Trichlorobenzene	2011	Levels lower than detect level	0 - 0	70	70	ppb	N	Discharge from textile-finishing factories.

1,2-Dichloroethane	2011	Levels lower than detect level	0 - 0	0	5	ppb	N	Discharge from industrial chemical factories.
1,2-Dichloropropane	2011	Levels lower than detect level	0 - 0	0	5	ppb	N	Discharge from industrial chemical factories.
Benzene	2011	Levels lower than detect level	0 - 0	0	5	ppb	N	Discharge from factories; Leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2011	Levels lower than detect level	0 - 0	0	5	ppb	N	Discharge from chemical plants and other industrial activities.
Chlorobenzene	2011	Levels lower than detect level	0 - 0	100	100	ppb	N	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2011	Levels lower than detect level	0 - 0	0	5	ppb	N	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2011	Levels lower than detect level	0 - 0	700	700	ppb	N	Discharge from petroleum refineries.
Styrene	2011	Levels lower than detect level	0 - 0	100	100	ppb	N	Discharge from rubber and plastic factories; Leaching from landfills.
Tetrachloroethylene	2011	Levels lower than detect level	0 - 0	0	5	ppb	N	Discharge from factories and dry cleaners.
Toluene	2011	Levels lower than detect level	0 - 0	1	1	ppm	N	Discharge from petroleum factories.
Trichloroethylene	2011	Levels lower than detect level	0 - 0	0	5	ppb	N	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2011	Levels lower than detect level	0 - 0	0	2	ppb	N	Leaching from PVC piping; Discharge from plastics factories.
Xylenes	2011	Levels lower than detect level	0 - 0	10	10	ppm	N	Discharge from petroleum factories; Discharge from chemical factories.
cis-1,2-Dichloroethylene	2011	Levels lower than detect level	0 - 0	70	70	ppb	N	Discharge from industrial chemical factories.

o-Dichlorobenzene	2011	Levels lower than detect level	0 - 0	600	600	ppb	N	Discharge from industrial chemical factories.
p-Dichlorobenzene	2011	Levels lower than detect level	0 - 0	75	75	ppb	N	Discharge from industrial chemical factories.
trans-1,2-Dichloroethylene	2011	Levels lower than detect level	0 - 0	100	100	ppb	N	Discharge from industrial chemical factories.

Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG Unit of Measure	Source of Disinfectant
2011	Chlorine Residual, Free	1.59	0.4	3.3	4	4 ppm	Disinfectant used to control microbes