



# 2007 Drinking Water Quality Report

## RRA - TURKEY - ESTELLINE WATER SYSTEM

Red River Authority of Texas

P. O. Box 240

Wichita Falls, Texas 76307-0240

(866) 723-8697

### OUR DRINKING WATER MEETS OR EXCEEDS ALL FEDERAL (EPA) DRINKING WATER REQUIREMENTS

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.

#### **Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems:**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

#### **En Espanol**

Este reporte incluye informacion importante sobre el agua para tomar. Si tiene preguntas o' discusiones sobre este reporte en espanol, favor de llamar al tel. (866) 723-8697 par hablar con una persona bilingue en espanol.

#### **WHERE DO WE GET OUR DRINKING WATER ?**

The **RRA-Turkey-Estelline Water System** utilizes ground water from the Alluvium formation and surface water from Greenbelt Lake. The ground water is produced through Authority owned wells and purchased from the City of Turkey. Treated surface water is purchased from the Greenbelt Municipal and Industrial Water Authority (GMIWA), who owns and operates Greenbelt Lake. The ground water from the wells and the purchased surface water is mixed in the ground storage tank located at the well site. The Texas Commission on Environmental Quality (TCEQ) has completed and provided the Authority a Source Water Susceptibility Assessment for the drinking water source(s) that we own as well as for the system(s) from which we purchase water. This 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. For more information on source water assessments and protection efforts for our system contact Mr. Henry C. Wied at (866) 723-8697.

## 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 Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

## PUBLIC PARTICIPATION OPPORTUNITIES

The Authority's Board of Directors regularly meets on the third Wednesday of January, April, July, and September of each year. Specific times and locations of these and/or any special meetings can be obtained by contacting the Authority at (866) 723-8697.

For more information about the water quality of your water system, public participation programs, water conservation programs, and/or general operations policies, call (866) 723-8697 or e-mail the Authority at: [info@rra.dst.tx.us](mailto:info@rra.dst.tx.us). For service requests or reporting leaks after normal business hours, contact your District Manager, Mr. Rickey Pierce at (940) 636-8031.

## SYSTEM INFORMATION

The Red River Authority of Texas owns and operates 29 registered public water supply systems through its Utility Division. The Utility Division maintains over 2,150 miles of transmission lines, two surface water treatment plants, 65 pumping facilities and serves approximately 10,000 customers residing in a 15 county area of the Red River Basin. The Utility Division is subdivided into geographical districts for proper management, maintenance, and financial accounting of individual systems.

The **RRA-Turkey-Estelline Water System** is one of the water systems operated by the Utility Division's District 11. In 2007, the system served 153 active connections with an average water use of 301 gallons per day per connection. The primary use of the water was rural domestic. All non-working fire hydrants were repaired. No other major capital improvement items were scheduled for 2007.

The Authority maintains a Water Conservation and Drought Contingency Plan for the Utility Division. Information on the plan is available on the Authority's web page at [www.rra.dst.tx.us](http://www.rra.dst.tx.us) or can be obtained by calling (866) 723-8697.

## DEFINITIONS:

### Maximum Contaminant Level (MCL) –

The highest level of a contaminant 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 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.

### Treatment Technique –

A required process intended to reduce the level of a contaminant in drinking water.

### Action Level –

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

**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 (ug/l)

**ppt** – parts per trillion, or nanograms per liter

**ppq** – parts per quadrillion, or picograms per liter

## 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 concerns. Therefore, secondaries are not required to be reported in this document, but they may greatly affect the appearance and taste of your water.

## ABOUT THE FOLLOWING TABLES

U.S. EPA requires water systems to test up to 97 constituents. The attached tables contain all of the federally regulated or monitored constituents which have been found in your drinking water. The U.S. EPA requires water systems to test up to 97 contaminants.

## Inorganic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2005-2006	Arsenic	2	0	0	10	0	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
2005-2006	Barium	0.112	0.016	0.208	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2005-2006	Chromium	2.3	2	2.6	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
2006	Fluoride	1.33	0.98	1.68	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2007	Nitrate	9.65	9.55	9.86	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2005-2006	Selenium	17.2	0	34.4	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
2005-2006	Combined Radium 226 & 228	0.45	0	0.9	5	0	pCi/L	Decay of natural and manmade deposits.
2005-2006	Gross beta emitters	5.4	5	5.8	50	0	pCi/L	Decay of natural and manmade deposits.
2005-2006	Gross alpha	4.8	1.1	8.5	15	0	pCi/L	Erosion of natural deposits.

### Additional Health Information for Nitrate

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. If you are caring for an infant you should ask advise from your health care provider.

### Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Disinfectant
2007	Chlorine Residual, Free	1.14	0.6	2.2	4	4	ppm	Disinfectant used to control microbes.

**Organic Contaminants** - TESTING WAIVED, NOT REPORTED, OR NONE DETECTED

**Total Coliform** - REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA.

**Fecal Coliform** - REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA

**Unregulated Initial Distribution System Evaluation for Disinfection Byproducts** - WAVIED OR NOT YET SAMPLED

## Disinfection Byproducts

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2007	Total Haloacetic Acids	18.9	8.2	39	60	ppb	Byproduct of drinking water disinfection.
2007	Total Trihalomethanes	76	59.2	86.2	80	ppb	Byproduct of drinking water disinfection.

## Unregulated Contaminants

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

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2007	Chloroform	7.93	0	15.86	ppb	Byproduct of drinking water disinfection.
2007	Bromoform	8.44	2.95	13.92	ppb	Byproduct of drinking water disinfection.
2007	Bromodichloromethane	10.56	0	21.11	ppb	Byproduct of drinking water disinfection.
2007	Dibromochloromethane	9.39	1.3	17.47	ppb	Byproduct of drinking water disinfection.

## Lead and Copper

Year	Contaminant	The 90 <sup>th</sup> Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Constituent
2000	Lead	3.9	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposit.
2000	Copper	0.048	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

## 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>.

## Turbidity

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.

Year	Constituent	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2007	Turbidity	0.50	99.00	0.3	NTU	Soil Runoff