

Continuing Our Commitment

Once again we proudly present our annual water quality report. This edition covers all testing completed from January through December 2005. We are pleased to tell you that our compliance with all state and federal drinking water laws remains exemplary. As in the past, we are committed to delivering the best quality drinking water. Our M.F. Runnion Water Treatment Plant has now been given four consecutive awards from the Texas Commission on Environmental Quality (TCEQ) for not only meeting, but also exceeding the basic standards for water quality and we have once again achieved a Superior System rating from the state. This does not however mean that our water is free of contaminants.

To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.

For more information about this report, or for any questions relating to your drinking water, please call the laboratory director at (956) 430-6161.

Community Participation

A five-member board appointed by the city commission governs the Harlingen Waterworks System. All members of the community are invited to participate in our public forum and voice their concerns about their drinking water. The Harlingen Waterworks Board of Trustees meet once a month on the third Thursday of every month in the second floor boardroom of the administrative offices located at 134 East Van Buren, Harlingen, Texas. For a copy of the meeting schedule or agenda, please call (956) 430-6157 or access the Harlingen Waterworks Web page at www.hwws.com.

Where Does My Water Come From?

The City of Harlingen Waterworks System obtains its supply of potable water from the Rio Grande River and is considered surface water. At the Harlingen diversion point the water travels through a series of canals and is deposited into our holding reservoirs located at each of the two water treatment plants. The water stays in these lakes until it is processed for drinking. Combined, our two treatment facilities provided roughly 3.7 billion gallons of clean drinking water last year.

Substances That Might Be in Drinking Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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 can acquire naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact our business office. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.



Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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.



Source Water Assessment

TCEQ completed an assessment of your source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system are based on the water's susceptibility to contaminants and previous sample data. Any detection of these contaminants will be found in this *Consumer Confidence Report*. For more information on source water assessments and protection efforts in our system, contact the laboratory director at (956) 430-6161.



Harlingen Waterworks System
134 East Van Buren
Harlingen, TX 78550

Este reporte incluye la información importante sobre su agua de beber. Para traducirlo en Español, llame al teléfono (956) 430-6161.

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Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES						
SUBSTANCE (UNITS)	MCLG	MCL	HIGHEST LEVEL	RANGE	POSSIBLE SOURCES	YEAR SAMPLED
Fluoride (ppm)	4	4	0.3	0.28-0.30	Erosion of natural deposits; Discharge from fertilizers	2005
Nitrate (ppm)	10	10	0.42	0.08-0.42	Runoff from fertilizer use; Leaching septic tanks, sewage; erosion of natural deposits	2005
Nitrite (ppm)	1	1	0.03	ND-0.03	Runoff from fertilizer use; Leaching septic tanks, sewage; erosion of natural deposits	1999
Selenium (ppb)	50	50	2.9	ND-2.9	Erosion of natural deposits	2002
Tap water samples were collected for Lead and Copper analysis from 30 homes throughout the service area						
SUBSTANCE (UNITS)	MCLG	ACTION LEVEL	AMOUNT DETECTED 90TH%TILE	RANGE	POSSIBLE SOURCES	YEAR SAMPLED
Lead (ppb)	0	AL=15	1.4	ND-10.2	Corrosion of household plumbing	2004
Copper (ppm)	1.3	AL=1.3	0.046	0.010-0.274	Corrosion of household plumbing	2004
DETECTED MICROBIOLOGICAL SUBSTANCES						
SUBSTANCE (UNITS)	MCLG	MCL	HIGHEST LEVEL	RANGE	POSSIBLE SOURCES	YEAR SAMPLED
Total Coliform Bacteria	0	5% of monthly samples	ND	ND	Naturally present in the environment	2005
Total Organic Carbon	NA	TT	50% removal	36-50	Naturally present in the environment	2005
DETECTED RADIOACTIVE SUBSTANCES						
SUBSTANCE (UNITS)	MCLG	MCL	HIGHEST LEVEL	RANGE	POSSIBLE SOURCES	YEAR SAMPLED
Beta Emitters (pCi/L) ¹	0	50	7	6.7-7.0	Decay of natural and man-made deposits	2005
Alpha Emitters (pCi/L)	0	15	<2.0	<2.00	Decay of natural and man-made deposits	2005
TREATMENT REQUIREMENTS						
SUBSTANCE (UNITS)	MCLG	MCL	HIGHEST LEVEL	RANGE	POSSIBLE SOURCES	YEAR SAMPLED
Turbidity (NTU) ²	NA	TT AL=0.3	0.2	0.03-0.2	Soil runoff	2005
DISINFECTION BY-PRODUCTS SUBSTANCES						
SUBSTANCE (UNITS)	MCLG	MCL	AVERAGE OF ALL SAMPLING POINTS	RANGE	POSSIBLE SOURCES	YEAR SAMPLED
Total Trihalomethanes (ppb)	0	80	48.6	29.5-78.4	By-product of drinking water chlorination	2005
Total Haloacetic Acids (ppb)	0	60	17.6	12.1-27.7	By-product of drinking water chlorination	2005
Chlorite (ppm)	0	1.0	0.79	0.1-0.79	By-product of drinking water chlorination	2005
Chloramines (ppm)	MRDLG=4	MRDL=4	3.4	0.5-5.5	Water additive used to control microbes	2005
Chlorine Dioxide (ppb)	MRDLG=800	MRDL=800	57	0-290	Water additive used to control microbes	2005

UNREGULATED SUBSTANCES

DETECTED INORGANIC SUBSTANCES				
SUBSTANCE (UNITS)	AMOUNT DETECTED HIGHEST LEVEL	RANGE	POSSIBLE SOURCES	YEAR SAMPLED
Sodium (ppm)	120	113-120	Natural Contaminant	2005
Total Hardness (ppm)	267	261-267	Natural Contaminant	2005
Total Alkalinity (ppm)	106	100-106	Natural Contaminant	2005
Chloride (ppm)	162	145-162	Natural Contaminant	2005
Sulfate (ppm)	225	216-225	Natural Contaminant	2005
DETECTED ORGANIC SUBSTANCES				
SUBSTANCE (UNITS)	AMOUNT DETECTED (AVERAGE OF ALL SAMPLING POINTS)	RANGE	POSSIBLE SOURCES	YEAR SAMPLED
Chloroform (ppb)	4.22	2.7-8.47	By-product of drinking water chlorination	2005
Bromoform (ppb)	16.05	6.8-29.91	By-product of drinking water chlorination	2005
Bromodichloromethane (ppb)	10.95	7.5-14.11	By-product of drinking water chlorination	2005
Dibromochloromethane (ppb)	17.39	10.2-30.3	By-product of drinking water chlorination	2005
Chloroacetic acid (ppb)	4.5	ND-12.7	By-product of drinking water chlorination	2005
Dichloroacetic acid (ppb)	3.7	ND-6.8	By-product of drinking water chlorination	2005
Trichloroacetic acid (ppb)	ND	ND	By-product of drinking water chlorination	2005
Bromoacetic acid (ppb)	ND	ND	By-product of drinking water chlorination	2005
Dibromoacetic acid (ppb)	9.4	6.1-15	By-product of drinking water chlorination	2005
Bromochloroacetic acid (ppb)	6.7	5.2-8.7	By-product of drinking water chlorination	2005

¹ The MCL for beta/photon emitters is written as 4 mrem/year. The U.S. EPA considers 50 pCi/L as the level of concern for beta emitters.

² Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. During the reporting year, 100% of all samples taken to measure turbidity met water quality standards.

How Is My Water Treated and Purified?

The treatment process consists of a series of steps. First, raw water is drawn from our holding reservoir and sent to the rapid mix, which mixes chlorine, chlorine dioxide, and aluminum sulfate into the water. The water then travels to the flocculation chamber where the addition of these substances causes small particles to adhere to one another (called *floc*) making them heavy enough to settle to the bottom of the chamber. The water then travels to clarification basins where the heavy particles and the sediment are removed. From there it travels to a filtration system where it is filtered through layers of fine coal and silicate sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges. The water is then sent to sanitized, underground reservoirs where chlorine is again added as a precaution against any contaminants that may still be present before the water is pumped to water towers and into your home or business. (We carefully monitor the amount of chlorine, adding the smallest quantity necessary to protect the safety of your water without compromising taste.)

Table Definitions

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

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable

ND: Not detected

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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

Water Conservation Tips

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill. Here are a few suggestions:

Conservation measures you can use inside your home include:

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Do not let the water run while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

You can conserve outdoors as well:

- Water the lawn and garden in the early morning or evening.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.
- Use water from a bucket to wash your car, and save the hose for rinsing.

Information on other ways that you can help conserve water can be found at www.epa.gov/safewater/publicoutreach/index.html.