

Garland's Water Quality Report 2011



Despite a Record Breaking Drought, Garland Water Utilities Delivers Exceptional Service

Garland Water Utilities experienced one of its most challenging years. Its commitment to exceptional service would not be deterred despite dealing with the worst drought in decades, a summer of record breaking temperatures and the infestation of Zebra mussels in Lake Texoma which combined diminished our water resources. Throughout it all, we successfully delivered drinking water that met all state and federal standards.

In 1996 Congress amended the Safe Drinking Water Act requiring community systems to provide customers with an annual report of the quality of their drinking water. We are proud to present our annual Water Quality Report. This report covers all testing completed from January 1 through December 31, 2011.

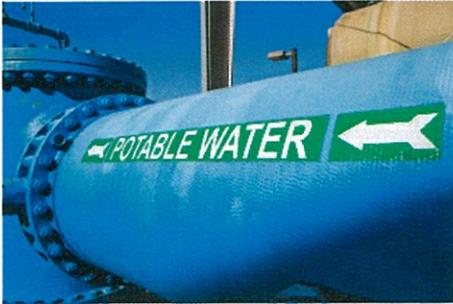
Garland Water Utilities is a municipal water distribution and wastewater collection utility, owned by the City of Garland. It stores purchased water and delivers it to you on demand, tests the water to ensure quality, maintains the infrastructure (pipes and pumps) required to deliver water and remove wastewater, and treats and tests wastewater prior to releasing it back into the water source or selling it.

A copy of this report is available in a printable version on our website at: www.garlandwater.com.

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. 972-205-3213 para hablar con una persona bilingue en español.

Water . . .

It is a precious commodity! Over 75% of the earth's surface is covered by water but, only 2.5% of that is fresh water and most of that is frozen in icecaps leaving less than 1% to sustain life.



Where Does My Water Come From?

North Texas Municipal Water District (NTMWD) uses surface water from five sources: Lavon Lake, Jim Chapman Lake, Lake Tawakoni, Lake Texoma and the East Fork Raw Water Supply Project commonly known as the "wetland", with Lavon Lake being the primary raw water source. NTMWD conducts daily tests on both the raw water in Lake Lavon and the treated water they deliver to the City of Garland. The treated water is stored in eight ground storage tanks, three elevated storage tanks and 1,110 miles of pipe network owned and operated by the City of Garland Water Utilities. A centralized water control system and customer call center with on-call maintenance assures that safe, high quality water is available to our customers 24 hours a day, 7 days a week, 365 days a year.



What Can Be In My Water?

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency 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 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 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 which may also come from gas stations, urban storm water runoff, and septic systems; **Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

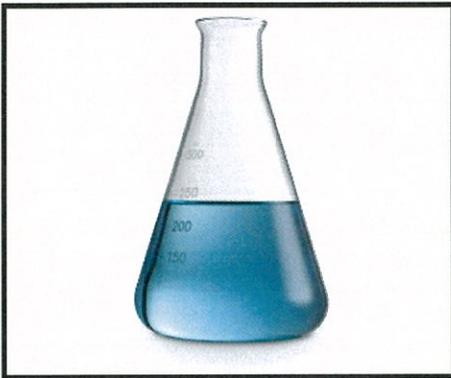
Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact our business office. For more information about contaminants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



Cryptosporidium in Water

Cryptosporidium is a protozoan that is so small it can be seen only with a microscope. It affects the digestive tract of humans and animals. At this time there is no specific drug therapy proven to be effective, but people with healthy immune systems will usually recover within two weeks. Symptoms of infection include nausea, diarrhea and abdominal cramps. However, immuno-compromised people are at greater risk of developing a life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precaution to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

North Texas Municipal Water District has tested the lake and treated water for the presence of cryptosporidium for several years and it was absent in all of the samples tested.



Lead in Water

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. Garland Water Utilities 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 www.epa.gov/safewater/lead.



Important Health Information

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly or immuno-compromised 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 may be more vulnerable than the general public to certain microbial contaminants in drinking water. If you suffer from one of these disorders/diseases, 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 U.S. EPA's Safe Drinking Water Hotline at 800-426-4791.



Source Water Assessment

The Texas Commission on Environmental Quality (TCEQ) has completed a Source Water Susceptibility Report for all drinking water systems that own their sources. 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 assessment report. For information on how you may obtain a copy of this report, call 972-205-3285.

Sampling Results

During the past year several hundreds of water samples have been taken in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The results of this testing is displayed in the table below. The state allows us to monitor for certain substances less than once per year because the concentrations of those substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which it was taken.

Unregulated Substances (Unit of Measure)	Year Sampled	MCL	MCLG	Amount	Range Low - High	Violation	Typical Source
Atrazine (ppb)	2011	3	3	.18	0.18 - 0.2	No	Runoff from herbicide used on row crops
Simazine (ppb)	2011	4	4	.07	0.07 - 0.16	No	
Barium (ppm)	2011	2	2	.04	0.04 - 0.04	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloramines (ppm)	2011	(4)	(4)	1.98	0.5 - 4.2	No	Water additive used to control microbes
Chlorine Dioxide (ppm)	2011	0.8	0.8	0.00	0.00 - 0.15	No	Water additive used to control microbes
Chlorite (ppm)	2011	0	NA	0.48	0.00 - 0.80	No	By-Product of drinking water disinfection
Fluoride (ppb)	2011	4	4	0.46	0.46 - 0.66	No	Erosion of natral deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids (HAA) (ppm)	2011	60	NA	16.47	12.1 - 23.5	No	By-Product of drinking water disinfection
Nitrate (ppm)	2011	10	10	0.55	0.05 - 0.55	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs (Total Trihalomethanes) (ppm)	2011	80	NA	36.16	25.5 - 55.1	No	By-product of drinking water chlorination.
Turbidity1 (NTU)	2011	TT	NA	0.96	0.3 - 99.15	No	Soil runoff
Total Choliform Bacteria	2011	5% positive samples	0	1.2	NA	No	Naturally present in the environment

Tap water samples were collected for lead and copper analysis from sample sites throughout the community.

Substances (Unit of Measure)	Year Sampled	AL	MCLG	Amount Detected	Sites Above AL/Total Sites	Violation	Typical Source
Copper (ppm)	2009	1.3	1.3	1.0	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2009	15	0	1.8	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits

Substances (Unit of Measure)	Year Sampled	Units	Range	Highest Average Sample Point	Typical Source
Gross Beta	2011	mrem/yr	4.4	4.4	Decay of natural and manmade deposits

Unregulated Contaminants

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. Any unregulated contaminants detected are reported in the following table. For additional information and data visit <http://www.epa.gov/safewater/ucmr/ucmr2/index.html>, or call the Safe Drinking Water Hotline at 800-426-4791.

Unregulated Substances (Unit of Measure)	Year Sampled	Amount Detected	Range Low - High	Typical Source
Bromodichloromethane (ppb)	2011	13.59	10.2 - 19.8	By-product of drinking water disinfection
Bromoform (ppb)	2011	1.18	1.0 - 1.7	By-product of drinking water disinfection
Chloroform (ppb)	2011	13.86	10.0 - 22.3	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2011	8.01	5.3 - 11.3	By-product of drinking water disinfection

Footnote: Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of disinfectants.

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. MCLs 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.

ND (Not Detected) Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units) Measurement of the clarity or turbidity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

PPM (Parts Per Million) One part substance per million parts water (or milligrams per liter - mg/L)

Public Notice

The City of Garland has been granted a two-year extension by the Texas Commission on Environmental Quality (TCEQ) to the Stage 2 Disinfection By-products 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 1, 2012 to March 30, 2014. During this period, compliance monitoring will continue under the Stage 1 Disinfection By-product 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 Charlie Messer, Water Operations Administrator at 972-205-3203.

Posted / Delivered on: June 1, 2012



Community Participation

Garland Water Utilities is part of the City government. The Garland City Council meets the first and third Tuesday of each month beginning at 7 p.m. in the City Hall Council Chamber, 200 North Fifth Street. Meetings are broadcast live on CGTV, the city government access channel on cable.

Garland City Council supports water conservation and encourages citizens to do their part in conserving this limited natural resource by using water wisely.



Conserving Water

The drought we experienced this year reminded us how precious water is and how much we tend to take this natural resource for granted. With less than 1% of the earth's fresh water source available, we need to learn to use water wisely. Water conservation is critical for meeting the state's long-term water needs. Here are ways to conserve water:

Inside the Home:

- Fix leaky faucets and toilets promptly to minimize water waste
- Turn off the faucet while you brush your teeth or shave
- Install a low flow showerhead, take showers instead of baths and limit your shower to 5 minutes.
- Make sure your dishwasher is full before you using it
- Use the appropriate water level or load selection on the washing machine
- Keep drinking water in the refrigerator instead of letting the faucet run until the water is cool



Outside the Home:

- Reduce lawn areas by adding SmartScape® or Xeriscaping into your landscaping
- Water the lawn during the coolest part of the day either before 10 a.m. or after 6 p.m.
- Detect and repair all leaks in hoses and irrigation system
- Use mulch around shrubs and garden plants to reduce evaporation from the soil surface
- Do not install or use ornamental water features unless they recycle the water
- Don't water sidewalks and driveways - sweep them with a broom instead
- Use soaker hoses and drip irrigation systems to water your foundation
If you use a soaker hose, turn it so the holes are on the bottom to avoid evaporation
- Don't scalp your lawn during hot weather



Approximately 40% of water use is contributed to landscape watering and 50% of that is wasted due to over and unnecessary watering. Remember an inch and a half of water, applied once a week, will keep most grass in Texas alive.

For more tips on how you can use less water visit our website at:

www.garlandwater.com