

**2009 Annual Drinking Water Quality Report
(Drinking Water Quality Report)**

**LAGUNA MADRE WATER DISTRICT
(956) 943-2626**

SPECIAL NOTICE: 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.

OUR DRINKING WATER IS REGULATED by the Texas Commission of Environmental Quality (TCEQ) and they have determined that certain water quality issues exist which prevent our water from meeting all of the requirements as stated in the Federal Drinking Water Standards. Each issue is listed in this report as a violation and we are working closely with the TCEQ to achieve solutions.

WATER SOURCES: 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 before treatment include; microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

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. (956)943-2626 par hablar con una persona bilingüe en español.

Public Participation Opportunities

Date: Every Second and Fourth Wednesday of the Month
Time: 6:00 pm
Location: Laguna Madre Water District Board Room
Phone No. (956) 943-2626

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 (ug/l)
ppt- parts per trillion, or nanograms per liter
ppq- parts per quadrillion, or picograms per liter

Where do we get our drinking water? Our drinking water is obtained from SURFACE water sources. It comes from the Rio Grande River to PORT ISABEL RESERVOIR, EL TULAR RESERVOIR. A Source Water Susceptibility Assessment for your drinking water source 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 our source water protection strategies. Some of this source water assessment information will be available later this year 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 call us.

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 (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 cause 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.

DEFINITIONS

Maximum Contaminant Level (MCL)

The highest permissible 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 contaminants.

Treatment Technique (TT)

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

Action Level (AL)

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

Inorganic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2009	Fluoride	0.34	0.33	0.34	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2009	Nitrate	0.09	0.07	0.1	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2008	Gross beta emitters	3.6	3	4.2	50	0	pCi/L	Decay of natural and man-made deposits.

Organic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2009	Di(2-ethylhexyl) phthalate	0.5	0	1	6	0	ppb	Discharge from rubber and chemical factories.

Maximum Residual Disinfectant Level

Systems must complete and submit disinfection data on the Surface Water Monthly Operations Report (SWMOR). On the CCR report, the system must provide disinfectant type, minimum, maximum and average levels.

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2009	Chloramines	3.28	0.6	4.0	4.0	<4.0	ppm	Disinfectant used to control microbes.

Disinfection Byproducts

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2009	Total Haloacetic Acids	21.5	17.2	24	60	ppb	Byproducts of drinking water disinfection
2009	Total Trihalomethanes	48	38.8	60.3	80	ppb	Byproducts of drinking water disinfection

Unregulated Initial Distribution System Evaluation for Disinfection Byproducts

This evaluation is sampling required by EPA to determine the range of total trihalomethane and haloacetic acid in the system for future regulations. The samples are not used for compliance, and may have been collected under non-standard conditions. EPA also requires the data to be reported here.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2008	Total Haloacetic Acids	26	10.8	52.4	NA	ppb	Byproducts of drinking water disinfection
2008	Total Trihalomethanes	42.2	19.3	125	NA	ppb	Byproducts 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
2009	Chloroform	6.35	5.2	7.6	ppb	Byproducts of drinking water disinfection
2009	Bromoform	5.85	4.3	7.4	ppb	Byproducts of drinking water disinfection
2009	Bromodichloromethane	11.55	9.1	14	ppb	Byproducts of drinking water disinfection
2009	Dibromochloromethane	10.45	7.9	13	ppb	Byproducts of drinking water disinfection

Lead and Copper

Year or Range	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2007	Lead	2.5	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2007	Copper	0.128	0	1.3	ppm	Corrosion of household plumbing systems; Leaching from wood preservatives.

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>."

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	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity limits	Unit of Measure	Source of Contaminant
2009	Turbidity	0.40	97.00	0.3	NTU	Soil runoff.

Total Organic Carbon

Total organic carbon (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 (HAA) which are reported elsewhere in this report.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2009	Source Water	2.76	2.00	3.74	ppm	Naturally present in the environment.
2009	Drinking Water	1.75	0.73	2.29	ppm	Naturally present in the environment.
2009	Removal Ratio	2.24	1.02	4.23	% removal*	NA

*Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

Cryptosporidium Monitoring Information

We monitored for Cryptosporidium, a microbial parasite that may be commonly found in Surface Water. Cryptosporidium may come from animal and human feces in the watershed. The result of our monitoring indicated there to be no Cryptosporidium in our source water.

Total Coliform

Total Coliform Bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms; themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Year	Contaminant	Highest Monthly Number of Positive Samples	MCL	Unit of Measure	Source of Contaminant
2009	Total Coliform Bacteria	2	*	Presence	Naturally present in environment.

* Two or more Coliform found samples in any single month.

Fecal Coliform: REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

VIOLATIONS

Violation Type	Health Effects	Duration	Explanation	Steps to correct
ROUTINE COLIFORM MONITORING - MINOR - NOT ENOUGH ROUTINE SAMPLES	We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During this compliance period, we did not correctly monitor, and therefore cannot be sure of the quality of your drinking water during that time.	2/1/2009 to 2/28/2009	Laboratory error, they sent Analysis results as credit for another city.	We sent TCEQ proof of all our samples collected. Talked to laboratory to send correct results.
TOTAL COLIFORM NON-ACUTE MCL-NO FECAL FOUND	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially- harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.	3/1/2009 to 3/31/2009	Operator error on collecting sample. Weather was not good in area sample collected.	We trained Operators on steps to collecting bacteriological samples.
TOTAL COLIFORM NON-ACUTE MCL-NO FECAL FOUND	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially- harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.	9/1/2009 to 9/30/2009	A Contaminated Sample Site was the cause of the positive sample.	We cleaned and disinfected sample site and the surrounding area.

Secondary and other Constituents Not Regulated

(No associated adverse health effects)

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2009	Bicarbonate	99	94	103	NA	ppm	Corrosion of carbonate rocks such as limestone.
2009	Chloride	212	203	220	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2008	Hardness as Ca/Mg	305	299	310	NA	ppm	Naturally occurring calcium and magnesium.
2009	pH	6.8	6.7	6.8	>7.0	units	Measure of corrosivity of water.
2009	Sodium	169	168	170	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2009	Sulfate	338	334	342	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2009	Total Alkalinity as CaCO ₃	81	77	84	NA	ppm	Naturally occurring soluble mineral salts.
2009	Total Dissolved Solids	933	913	952	1000	ppm	Total dissolved mineral constituents in water.