



CITY OF ODESSA 2007 WATER QUALITY REPORT

ODESSA'S DRINKING WATER EXCEEDS ALL FEDERAL PRIMARY DRINKING WATER REQUIREMENTS!

This report is a summary of the quality of water Odessa provides its customers. The analysis was made by using the data from the most recent Federal and State required tests and is presented on the following pages. We hope this information helps you to become more knowledgeable about your drinking water.

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. (432) 335-4625 – para hablar con una persona bilingüe en español.

Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, and 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 (800-426-4791).

Where Do We Get Our Drinking Water? The City purchases all of its water, untreated, from the Colorado River Municipal Water District (CRMWD). The majority of the water is surface water from Lake Ivie. Lake Thomas and Lake Spence are also sources for our drinking water supply. The City may also receive water from Ward and Ector Counties wells during certain times of the year to supplement the surface water supplies. A Source Water Susceptibility Assessment for our drinking water sources is currently being updated by the Texas Commission on Environmental Quality and will be provided to us this year. The report will describe the susceptibility and types of constituents that may come into contact with our drinking water source based on human activities and natural conditions. The information contained in the assessment will allow us to focus our source water protection strategies. For more information on source water assessments and protection efforts, please contact us.

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.

About the Tables Contained In This Report. The tables in this report list all of the federally regulated or monitored constituents, which have been found in Odessa's water. The EPA requires testing of up to 97 constituents. The concentrations (MCL and MCLG) of these standards are set by the EPA based on the potential health effects of the regulated constituent in the public water supply. The following terms are used in the tables:

Maximum Contaminant Level (MCL) - The highest permissible level of a contaminant in drinking water. MCL's are set as close to the MCLG 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. MCLG's allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) – The highest running annual average 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 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 (TT) - Required process 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.

NTU - Nephelometric Turbidity Units.

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 (µg/L).

MPN – Most Probable Number

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 at (800) 426-4791.

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 in 95% of Samples	Unit of Measure	Source of Constituent
2007	Turbidity	0.50	98.0%	0.3	NTU	Soil runoff

Cryptosporidium Monitoring – The City has tested its surface water for Cryptosporidium and **E. coli** as required by the Long Term Stage 2 Enhanced Surface Water Treatment Rule. Cryptosporidium was not detected in any of the samples analyzed in 2007. The highest concentration of **E. coli** detected in the surface water samples was 27.1 MPN/100 ml. **E. coli** is a microbial pathogen that may be found in water contaminated by feces and can cause nausea, diarrhea and abdominal cramps. The analyses performed on the distribution system samples did not detect any **E. coli**. Therefore, the treatment process effectively removed any **E. coli** organisms in the surface 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 % of Positive Samples	MCL	Unit of Measure	Source of Contaminant
2007	Total Coliform Bacteria	1	*	Presence	Naturally present in the environment
<ul style="list-style-type: none"> • Presence of coliform bacteria in 5% or more of the monthly samples 					

Fecal Coliforms – No fecal coliform bacteria were detected in the water supply during the required monitoring for 2007.

Inorganics

Year	Constituent	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Constituent
2002	Arsenic	4	4	4	10	0	ppb	Erosion of natural deposits. Runoff from orchards. Runoff from glass & electronics production wastes.
2002	Barium	0.186	0.186	0.186	2	2	ppm	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
2007	Fluoride	0.54	0.54	0.54	4	4	ppm	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.
2007	Nitrate	0.16	0.16	0.16	10	10	ppm	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.
2002	Selenium	11.7	11.7	11.7	50	50	ppb	Discharge from petroleum and metal refineries. Erosion of natural deposits. Discharge from mines.
2005	Gross alpha	0.9	0.9	0.9	15	0	pCi/L	Erosion of natural deposits.
2005	Gross beta emitters	8.5	8.5	8.5	50	0	pCi/L	Decay of natural and man-made deposits.

Organic Contaminants: Testing waived, not reported, or none detected.

Disinfectant Residuals

Year	Constituent	Annual Average	Range of Detected Levels from Single Sample		MRDL for Annual Average	MRDLG	Unit of Measure	Source of Constituent
			Minimum	Maximum				
2007	Chloramines	2.8	0.5	4.7	4	<4.0	ppm	Disinfectant used to control microbes.

Total Organic Carbon (TOC)

TOC has no health effects. The disinfectant can combine with TOC to form disinfection byproducts (THM and HAA) which are reported below. Disinfection is necessary to ensure the water does not have unacceptable levels of pathogens.

Year	Constituent	Average	Range		MCL	MCLG	Units of Measure	Source of Constituent.
			Minimum	Maximum				
2007	Raw Water TOC	5.06	4.84	5.69	NA	NA	ppm	Naturally occurring
2007	Treated Water TOC	4.45	3.99	4.90	NA	NA	ppm	Naturally occurring

Trihalomethanes

Year	Constituent	Average of all Sampling Points	Minimum Level	Maximum Level	MCL, Annual Average of all samples	Unit of Measure	Source of Constituent
2007	Total Trihalomethanes (THM)	52.8	47.4	57.8	80	ppb	By-product of drinking water chlorination.
2007	Total Haloacetic Acids (HAA)	15.4	13.7	18.0	60	ppb	By-product of drinking water chlorination.

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
2007	Total Haloacetic Acids	23.5	0	100.0	NA	ppb	Byproduct of drinking water disinfection
2007	Total Trihalomethanes	110.8	33.6	526.2	NA	ppb	Byproduct of drinking water disinfection

Unregulated Contaminants

Odessa has participated in the Unregulated Contaminant Monitoring Rule by sampling for the following parameters. There is no MCL for these chemicals at the entry to the distribution system.

Year	Constituent	Average Level	Minimum Level	Maximum Level	Unit of Measure	Reason for Monitoring
2007	Bromoform	23.25	23.25	23.25	ppb	Byproduct of drinking water disinfection.
2007	Bromodichloromethane	5.49	5.49	5.49	ppb	Byproduct of drinking water disinfection.
2007	Chlorodibromomethane	14.5	14.5	14.5	ppb	Byproduct of drinking water disinfection.
2007	Chloroform	1.29	1.29	1.29	ppb	Byproduct of drinking water disinfection.

Lead and Copper

Year	Constituent	The 90 th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Constituent
2006	Lead	4.1	0	15	ppb	Corrosion of household plumbing systems. Erosion of natural deposits.
2006	Copper	0.178	0	1.3	ppm	Corrosion of household plumbing systems. Erosion of natural deposits. Leaching from wood preservatives.

Secondary and Other Constituents as performed by the State's Laboratory

These constituents are not causes for health concern, but are regulated by Texas, not the EPA. We are therefore, not required to report these constituents, but provide the information since they may impact the taste of the water.

Year	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2007	Bicarbonate	111	111	111	NA	ppm	Corrosion of carbonate rocks such as limestone.
2002	Calcium	119	119	119	NA	ppm	Abundant naturally occurring element.
2007	Chloride	326	326	326	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2002	Magnesium	72	72	72	NA	ppm	Abundant naturally occurring element.
2007	pH	7.8	7.8	7.8	>7.0	Standard units	Measure of corrosivity of water.
2002	Sodium	328	328	328	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2007	Sulfate	278	278	278	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2007	Total Alkalinity as CaCO ₃	111	111	111	NA	ppm	Naturally occurring soluble mineral salts.
2007	Total Dissolved Solids	979	979	979	1000	ppm	Total dissolved mineral constituents in water.
2007	Total Hardness as CaCO ₃	418	418	418	NA	ppm	Naturally occurring element.

Questions or Comments? The Utilities Department values your comments on the Water Quality Report as well as on other issues relating to water quality or provision of water service. No meetings concerning this report are scheduled. If you have any comments or questions or would like additional conservation information, please contact us by calling 335-4625, write us at City of Odessa Utilities Department, P.O. Box 4398, Odessa, Texas 79760 or email us at utilities@ci.odessa.tx.us.