



## CITY OF ODESSA 2006 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 water supply.

*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, 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 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 of surface water 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 at our system, 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
2006	Turbidity	0.37	99.5%	0.3	NTU	Soil runoff

**Cryptosporidium Monitoring** – In October 2006, the City initiated testing of 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 2006. The highest concentration of **E. coli** detected in the surface water samples was 12.6 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 and Fecal Coliforms** – No total or fecal coliform bacteria were detected in the water supply during the required monitoring for 2006.

**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.
2006	Fluoride	0.34	0.34	0.34	4	4	ppm	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.
2006	Nitrate	0.22	0.22	0.22	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 manmade deposits.

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

### Disinfectant Residuals

Year	Constituent	Annual Average	Range of Detected Levels		MRDL for Annual Average	MRDLG	Unit of Measure	Source of Constituent
			Minimum	Maximum				
2006	Chloramines	3.0	0.3	5.1	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				
2006	Raw Water TOC	4.31	3.48	4.99	NA	NA	ppm	Naturally occurring
2006	Treated Water TOC	3.77	2.88	4.32	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
2006	Total Trihalomethanes (THM)	54.1	27.9	100.9	80	ppb	By-product of drinking water chlorination.
2006	Total Haloacetic Acids (HAA)	16.8	10.8	25.2	60	ppb	By-product of drinking water chlorination.

### Lead and Copper

Year	Constituent	The 90 <sup>th</sup> 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.

### Unregulated Contaminant Monitoring Rule Data (UCMR)

Odessa participated in gathering data under the UCMR in order to assist the EPA in determining the occurrence of possible drinking water contaminants. The unregulated contaminants detected are listed below. This data may also be found on the EPA website at <http://www.epa.gov/safewater/data/ncod.html>, or by calling the Safe Drinking Water Hotline at 800-426-4791.

Year	Constituent	Average Level	Minimum Level	Maximum Level	Unit of Measure	Reason for Monitoring
2006	Bromoform	16.78	16.78	16.78	ppb	Byproduct of drinking water disinfection.
2006	Bromodichloromethane	4.32	4.32	4.32	ppb	Byproduct of drinking water disinfection.
2006	Chlorodibromomethane	10.69	10.69	10.69	ppb	Byproduct of drinking water disinfection.
2006	Chloroform	1	1	1	ppb	Byproduct of drinking water disinfection.

**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
2006	Bicarbonate	128	128	128	NA	ppm	Corrosion of carbonate rocks such as limestone.
2002	Calcium	119	119	119	NA	ppm	Abundant naturally occurring element.
2006	Chloride	304	304	304	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.
2006	pH	7.9	7.9	7.9	7	Standard units	Measure of corrosivity of water.
2002	Sodium	328	328	328	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2006	Sulfate	248	248	248	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2006	Total Alkalinity as CaCO <sub>3</sub>	128	128	128	NA	ppm	Naturally occurring soluble mineral salts.
2006	Total Dissolved Solids	938	938	938	1000	ppm	Total dissolved mineral constituents in water.
2006	Total Hardness as CaCO <sub>3</sub>	422	422	422	NA	ppm	Naturally occurring element.
2006	Fluoride	0.34	0.34	0.34	4	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 or write us at City of Odessa Utilities Department, P.O. Box 4398, Odessa, Texas 79760.