

CITY OF GIBRALTAR

2008 Regulated Detected Contaminants Tables

2008 Cryptosporidium Language

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Cryptosporidium was detected once, during a twelve-month period at our Detroit River intake plants. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Inorganic Chemicals – Annual Monitoring at Plant Finished Water Tap								
Fluoride	9/9/2008	ppm	4	4	1.05	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	9/9/2008	ppm	10	10	0.23	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	6/9/2008	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Disinfectant Residuals and Disinfection By-Products – Monitoring in Distribution System								
Total Trihalomethanes (TTHM)	Feb-Nov 2008	ppb	n/a	80	19.9	7.9-36.4	no	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	Feb-Nov 2008	ppb	n/a	60	11.4	4.9-14.6	no	By-product of drinking water disinfection.
Disinfectant (Total Chlorine) Residual)	Jan-Dec 2008	ppm	MRDGL 4	MRDL 4	0.73	0.51-0.79	no	Water additive used to control microbes.

2008 Turbidity – Monitored every 4 hours at Plant Finished Water Tap			
Highest Single Measurement Cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation yes/no	Major Sources in Drinking Water
0.27 NTU	100%	no	Soil Runoff

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

2008 Microbiological Contaminants – Monthly Monitoring in Distribution System

Contaminant	MCLG	MCL	Highest Number Detected	Violation yes/no	Major Sources in Drinking Water
Total Coliform bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	In one month 0	NO	Naturally present in the environment.
E.coli <i>or fecal</i> coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E.coli positive.	in entire year 0	NO	Human waste and animal fecal waste.

2008 Lead and Copper Monitoring at Customers' Tap

Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2008	ppb	0	15	6 ppb	0	NO	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2008	ppm	1.3	1.3	0.06 ppm	0	NO	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.

*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.

Regulated Contaminant	Treatment Technique	Running annual average	Monthly Ratio Range	Violation Yes/No	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each month and because the level was low, there is no requirement for TOC removal.				Erosion of natural deposits

2008 Special Monitoring

Contaminant	MCLG	MC L	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.75	Erosion of natural deposits

Information and tables provided by Detroit Water and Sewerage Department (DWSD) ML

UNREGULATED CONTAMINANT MONITORING

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. Beginning in July of 2008, the Detroit Water and Sewerage Department (DWSD) began monitoring quarterly for unregulated contaminants under the Unregulated Contaminant Monitoring Rule 2 (UCMR2.) All the UCMR contaminants monitored on List 1 and List 2 in 2008 were undetected.

Key to Detected Contaminants Tables		
Symbol	Abbreviation for	Definition/Explanation
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health.
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.
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.
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.
ppb	Parts per billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
ppm	Parts per million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic acids	HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and, trichloroacetic acids. Compliance is based on the total.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.
n/a	Not applicable	
≤	Greater than	

WATER AND SEWER RATE INCREASE

At the Council Meeting on May 26, 2009, the following Water and Sewer unit rates were approved to be applied to the bills that will be delivered in July.

	<u>Old Unit Rate</u>	<u>New Unit Rate</u>
Water	\$4.64	\$4.77
Sewer	\$5.40	\$7.48
SHVUA Look Back Adjustment	\$0.53	\$0.53
SHVUA Emergency Repair	<u>\$0.63</u>	<u>\$ ---</u>
	\$11.20	\$12.78

The unit rates are based per 1,000 gallons

The City of Gibraltar was forced to raise Water and Sewer rates for a number of reasons.

- The Water and Sewer fund has not met the annual budget assumptions for the past few years. The fund needs to be self-sufficient through water usage fees, and not be reliant on tax collection funds.
- The Water and Sewer fund has no meaningful levels of working capital (no reserve fund). There are no reserves in the system to make necessary repairs and replacement to an aging system. Approximately 95% of the water distribution system and sewer system was built prior to the 1970's. For a number of years, there has been no money set aside for Capital Improvements and Capital Equipment. The City is now in the process of formulating a plan for Capital Improvements and replacing Capital Equipment. The plan will include starting to replace the aging Water Main system, install Pressure Relief Valves, slip-line sewer pipes to eliminate infiltration, and begin replacing some older operating equipment. These projects will be paid for through either direct payments or bonding.
- There have been significant increases to the sewer rates that the City receives from the South Huron Valley Utility Authority (SHVUA). There have also been significant water rate increases in six of the last seven years that have been applied by Detroit Water. The City anticipates that SHVUA will be implementing additional Capital Improvements in the next few years, which will lead to additional rate increases.
- The Water and Sewer Department has experienced increased operating expenses for items such as fuel, electrical and heating utilities, healthcare, and retirement costs.
- The SHVUA Look Back Adjustment became necessary because the Water and Sewer fund owes approximately \$170,000 to SHVUA for excess sewer usage in 2005, 2006, and 2007. The Look Back Adjustment amount was determined when SHVUA performed a review of actual sewer usage compared to the amount that was billed to the City. It is anticipated that this should be paid off after the October 2010 billing cycle.
- The SHVUA Emergency Repair was for the costs incurred to repair the main sewer line on West Jefferson. The cost to the City was approximately \$80,000. This amount has been paid off and removed from the Water and Sewer rate.