

## City of Spring Hill Water Quality Report - 2007

The data presented in this report is from testing done between January 1, 2007 and December 31, 2007. Some of the contaminants are monitored less than once per year, for those the date of the last sample is shown on the table

Contaminant	Violation Y/N	Level Detected	Range of Detection	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	No	3 positive	3 in 471	2007	-----	0	no more than 1/month or 5%	Naturally present in the environment
Turbidity	No	0.061	.020 - .834*	2007	NTU	N/A	TT	Soil Runoff
Total Organic Carbon (4)	No	1.52	1.07 - 2.22	2007	PPM	N/A	TT	Naturally present in the environment
Fluoride	No	0.903	.717 - 1.05	2007	PPM	4.0	4.0	Erosion of natural deposits; Water additive that promotes strong teeth and bones; Discharge from fertilizer and aluminum factories.
Sodium	No	5.6	-----	2007	PPM	N/A	N/A	Erosion of natural deposits
Atrazine	No	0.09	.08 - .11	2007	PPB	3.0	3.0	Runoff from herbicide used on row crops
Nitrate	No	0.96	-----	2007	PPM	10	10	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits
Lead (1)	No	BDL**	BDL - .0016	2007	PPM	15	AL=15	Erosion of natural deposits; Corrosion of household plumbing
Copper (1)	No	.083**	.170 - .003	2007	PPM	1.3	AL=1.3	Erosion of natural deposits; Corrosion of household plumbing
Total Trihalomethanes (5)	No	50.3	14.2 - 113.9	2007	PPB	0	80	By products of drinking water chlorination
Total Haloacetic Acids	No	40.8	11.0 - 102.0	2007	PPB	0	60	By products of drinking water chlorination
Gross Alpha	No	0.8	1.2 - 1.6	2004	pCi/L	0	15	Erosion of natural deposits
Radium 226-228	No	0.75	1.0 - 1.5	2004	pCi/L	0	5	Erosion of natural deposits
Alkalinity	No	106	53 - 176	2007	PPM	N/A	N/A	Capacity of water to neutralize acids.
Hardness (2)	No	132	78 - 244	2007	PPM	N/A	N/A	Erosion of natural deposits
Cryptosporidium (3)	No	0	0	2007	# / L	N/A	N/A	Agricultural Runoff, Leaching From Septic Tanks, Testing performed on River Water Samples
Giardia (3)	No	0.008	0.0 - 0.1	2007	# / L	N/A	N/A	Agricultural Runoff, Leaching From Septic Tanks, Testing performed on River Water Samples
Disinfectant Residual	Violation Y/N	Level Detected	Range of Detection	Date of Sample	Unit Measurement	MRDLG	MRDL	Likely Source
Chlorine	No	2.98	1.35 - 3.51	2007	PPM	4.0	4.0	Water Additive used to control microbes

\* Highest single measurement for turbidity. We met the treatment technique with 99.8% of monthly samples below the turbidity limit of 0.3 NTU.

(1) During the most recent round of lead and copper testing, 0 out of 30 households sampled contained concentrations exceeding the action level.

\*\* 90th percentile

(2) Average 7.73 grains per gallon (4.56 - 14.27 grains per gallon)

(3) Samples are from the raw water (river) source. Samples were collected to comply with new regulations.

(4) TOC = Total Organic Carbon; This value should be greater than 1.00. We met the treatment technique requirements for Total Organic Carbon in 2007.

(5) Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

**MCLG - Maximum Contaminant Level Goal**, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**MCL - Maximum Contaminant Level**, or 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. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

**Turbidity** - does not present any risk to your health. SHWTP monitors turbidity, a measurement of the clarity of water, because it is a good indicator that the filtration system is functioning properly.

**PPB - Parts Per Billion** or Micrograms per liter (1 ppb = one penny in \$10,000,000 or 1 minute in 2,000 years)

**PPM - Parts Per Million** or Milligrams per liter (1 ppm = one penny in \$10,000 or 1 minute in 2 years)

**N/A** - Not Applicable

**NTU - Nephelometric Turbidity Units**, a measurement of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**TT - Treatment Technique**, or a required process intended to reduce the level of contaminants in drinking water.

**AI - Action Level**, or a concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

**pCi/l - Picocurie Per Liter** A measurement of radioactivity

**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 the 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.

**BDL - Below Detection Limit**

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 and 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:

**Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater 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 stormwater runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals which are by-products of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive contaminants** which can be naturally-occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA and the Tennessee Department of Environment and Conservation prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.