

What is a Water Quality Report?

This report provides you with information about the water quality and explains the results. Our goal is to provide you with a safe and dependable supply of drinking water. For more information on the drinking water quality, call (615) 459-3574. The Town of Smyrna Council meets in the Town Hall Council Room every 2nd Tuesday of the month at 7:00 p.m. Here, there are opportunities for public participation in decisions that may affect the quality of the water. For more information on the Council meetings please contact the Office of the Town Manager at (615) 459-2553.

For any other information on you water quality, please contact Chris Lambert or Kevin Relford at the Smyrna Water Treatment Plant at (615)459-3574.

We at Smyrna Utilities work hard to maintain the best quality water for the Town of Smyrna, Nolensville, and adjacent customers on our system.

Thank you for spending time reviewing this report on the Town of Smyrna Utilities water quality.

Where does my water come from?

Your water, which is surface water, comes from the Stones River/ J. Percy Priest Lake. Our goal is to protect our water from contaminants and we are working with the state to determine the vulnerability of our water source to *potential* contamination. The Tennessee Department of Environment and Conservation (TDEC) has prepared a source Water Assessment Program (SWAP) Report for the untreated water sources to *potential* contamination. To ensure safe drinking water, all public water systems treat and routinely test their water. Water sources have been rated as reasonably susceptible (high), moderately susceptible (moderate), or slightly susceptible (low) based on geologic factors and human activities in the vicinity of the water source. The Smyrna Water System sources rated as reasonably susceptible to *potential* contamination.

An explanation of Tennessee's Source Water Assessment Program, the Source Water Assessment summaries, susceptibility scorings and the overall TDEC report to EPA can be viewed online at:

<http://www.state.tn.us/environment/dws/dwassess.shtml>.

Copies of this source water assessment can also be viewed at Smyrna Town Hall in the Utilities department, the Smyrna Library, or the

Smyrna Water Treatment Plant. **How hard is our water?**

The water drawn from J. Percy Priest Lake is hard/very hard with a 2006 hardness average of 197 ppm (mg/l) or about 11.5 grains/gallon. Hardness is caused by naturally-occurring calcium and magnesium found in the water. Smyrna Utilities is aware of the problems caused by water hardness and is currently researching methods of softening the water to an average of 100 ppm (mg/l). We will keep the customer informed of any major changes dealing with water softening.

Why is there someone flushing the fire hydrant in my neighborhood?

The Smyrna Water System regularly flushes hydrants to prevent the build-up of mineral deposits and to better regulate chlorine residuals in the system.

Smyrna Utilities will be ramping up the flushing program in 2007 to what is termed a "Unidirectional Flushing Program". This program will assist in providing the customer with a much better water quality at the tap.

Violation Notice – On September 1, 2006, the Smyrna Water Plant collected a line repair total coliform sample at the intersection of Johnson Street and Todd Lane. As per our interpretation of TDEC regulations (rule 1200-5-1-.07) the water plant personnel performed repeat sampling at the same location the next two days. The repeat samples tested negative for total coliforms. The water plant staff overlooked a new interpretation of the TDEC regulations (as of July 1, 2006) which states multiple sites have to be tested for total coliform when an initial line repair sample is positive. The Smyrna Water Treatment Plant received a violation for failure to properly collect a repeat bacteriological (total coliform) sample on a repaired line. The violation is a Tier III in which the water system has one year to report it to the public.

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 the compliance period of September 2006, we did not properly perform the repeat samples for total coliforms at the line repair location stated above, and therefore cannot be sure of the quality of your drinking water during that time.

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 the initial sample of the repaired line. This could have been a result of improperly handling the sampling equipment or actual coliforms were present. The water system did resample the site twice after finding the initial positive and both repeat samples were negative for coliform. We received a violation because we did not pull enough samples after receiving the initial positive.

The water system learned of the oversight of the new regulation interpretation after preparing the state monthly operational report for September 2006. We clarified the new interpretation of the rule with the TDEC Environmental Assistance Center and have been in compliance since October 2006. We were only out of compliance on the one repair line sample in September.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

If you have any questions regarding this notice please contact Kevin Relford at the Smyrna Water Treatment Plant,.

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

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2006 Water Quality Report Smyrna Water System

The big question...Is the water safe to drink?

Absolutely! Drinking water provided to you by the Smyrna Water System meets or exceeds all federal and state drinking water standards. The water is tested and checked continuously each day to make sure it is safe. Thousands of tests are performed each month on the water that leaves the filtration plant, as well as the water that travels through the distribution system to your homes, businesses, and industries. 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/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).

Water Quality Enhancements on the Horizon

Smyrna Utilities is currently researching alternative treatment techniques not only to produce a safer water, but to provide a much better tasting finished water product. Organic matter found in Smyrna's source has historically been extremely hard to treat with the technology present at the water plant. The water plant added a carbon feed system in 2004 to improve the taste and odor of the water. We are currently researching techniques such as softening, micro- and ultra-filtration, and alternative oxidants to provide you with the best water quality available.

With the new and more stringent EPA and state regulations, Smyrna Utilities continues to provide you with an excellent supply of safe drinking water.

2006 Laboratory Analyses Results

Key to Understanding the Table

AL: Action Level, the concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.

MCL: Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

MRDL: Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant 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.

TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

ppm: parts per million or milligrams per liter.

ppb: parts per billion, or micrograms per liter.

N/A: Not applicable.

NTU: Nephelometric Turbidity Unit, a measure of particles in the water.

What is 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 including bacteria, viruses, and parasites.

- Copper and Lead**: Data presented are from the most recent testing done in accordance with state of Tennessee and EPA guidelines. 0 of the 30 households tested exceeded the action level for lead and copper.
- Coliform**: *The Smyrna Water Treatment Plant lab pulled 3 positive total coliform samples at separate times in the distribution system (3/17/06, 9/1/06, 9/20/06). Repeat sampling done in these locations proved negative results. All positive samples were attributed to sampling error where the sample was contaminated either during the sampling procedure or during laboratory analysis.

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 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. In order to ensure that tap water is safe to drink, EPA and the Tennessee Dept. 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.

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 (800-426-4791).

Contaminant	Test Date	Unit	MCL	MCLG	Detection	Range	Sources	Violation
Copper¹	7/19/2005	ppm	1.3	1.3	0.220 (90th percentile)	0.0037—0.74	Household plumbing corrosion, erosion of natural deposits, leaching of wood preservatives	No
Fluoride	2006	ppm	4	4	1.27	0.16-1.27 Annual Ave. 0.95	Erosion of natural resources, additive to promote strong teeth, discharge from fertilizer and aluminum factories	No
Lead¹	7/19/2005	ppb	15	0	9.1 (90th percentile)	1.1 - 9.1	Erosion of natural resources, household plumbing corrosion	No
Atrazine	1/17/2006 5/12/2006 9/14/2006	ppm	0.003	0.003	All tests below detection limit	All tests below detection limit	Runoff from herbicides	No
Nitrate	10/19/2006	ppm	10	10	<0.05	<0.05	Fertilizer runoff, leaching from septic tanks, sewage, erosion of natural deposits	No
Turbidity*		NTU	0.3	N/A	0.46	0.03-0.46	Soil Runoff	No
Coliform²	Total: (MCL =Less than 2 samples/month)			0%	3	0-3	Naturally Present	Yes
	Fecal: (MCL = 0% samples)			0%	0	0	Animal or human waste	
	100% of samples tested negative for fecal coliform.							
Total Trihalomethanes (TTHMs)		ppb	80	N/A	Ave. 59.5	33.9 – 89.3***	By-product of water chlorination	No
Haloacetic Acids (HAA)		ppb	60	N/A	Ave. 56.1	34.0 – 70.0	By-product of water chlorination	No
Chlorine		ppm	MRDL=4	MRDLG=4	Annual Ave.= 2.5	1.5 - 3.3	Disinfectant added to kill pathogens	No
Total Organic Carbon** (TOC)		ppm	TT	N/A	Annual Ave.= 2.28	1.30 - 3.29	Naturally present in the environment	No

*We met the treatment technique for turbidity in 2006 with at least 95% of samples being less than 0.3 NTU.

**We met the treatment technique for total organic carbon in 2006.

***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 systems, and may have risk of getting cancer.