



**White House Utility District
Water Quality Report
2007**

Is my drinking water safe?

Yes. The water produced by White House Utility District meets or exceeds **ALL** of the nation's water quality standards required by the Environmental Protection Agency. We take great strides to ensure your water is safe every time you turn on your faucet or drink from a public water fountain. Daily water quality tests are conducted by the District to ensure the water produced and delivered to your home is safe to drink. These tests are routinely performed while testing for over 80 possible contaminants using the newest technologies available.

As evidenced further in this report, during 2007 ten contaminants were detected in the water supply. Of the ten contaminants detected, all met the levels considered safe by the Environmental Protection Agency.

What is the source of my water?

Your water, which is surface water, comes from Old Hickory Lake. Our goal is to protect your water from contaminants, and we work with the State of Tennessee on an on-going basis to examine 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 serving this water system. The SWAP Report assesses the susceptibility of untreated water sources to potential contamination. The White House Utility District system source is rated as reasonably susceptible to potential contamination. To ensure safe drinking water, all public water systems treat and routinely test their water.

An explanation of Tennessee's Source Water Assessment Program, the Source Water Assessment summaries, susceptibility scorings, and the overall TDEC report to the EPA can be viewed online at www.state.tn.us/environment/dws/dwassess.shtml, or you may contact the District to obtain copies of specific assessments.

It is the goal of the District to eliminate as many of these contaminants **at the source** of intake, prior to it reaching our water plant.

Why are there contaminants in my water?

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 include:

- 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 may also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive Contaminants, which can be naturally-occurring or the result of oil and gas production and mining activities.

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. In order to ensure that tap water is safe to drink, EPA and the Tennessee Department of Environment and Conservation prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

Our drinking water meets EPA standards for trihalomethanes. The EPA establishes Maximum Contaminant Levels (MCLs) using the assumption that if most people drink 2 liters of water containing disinfection byproducts in excess of the MCL every day for 70 years, then 1 person in 10,000 may have an increased risk of cancer. 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. More information about contaminants such as trihalomethanes and their potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Is our water system meeting other rules that govern our operations?

White House Utility District is required by the State of Tennessee as well as the Environmental Protection Agency to test and report our water quality results on a regular basis to ensure the safety of your drinking water. The District maintains records of all customer complaints as well as a record of the action taken regarding these complaints. This file is available for your review at our District office. In 2007, the district met or exceeded **ALL** water quality requirements of the State of Tennessee as well as of the Environmental Protection Agency.

Other Information

As part of our treatment process, chlorine is added in minimal amounts to adequately disinfect your drinking water. As a byproduct of the chlorination process, you may detect a noticeable chlorine taste or odor in the water.

If you are sensitive to chlorine, make sure your faucet aerator is in place and working properly. Aeration is a simple way to improve the taste of water. You might also try filling a pitcher with tap water and keeping it in the refrigerator. If you choose to use a home water-filtering device, be sure to regularly replace and maintain the filter elements as recommended by the manufacturer.

Do I Need To Take Special Precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons; such as persons 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

How can I ensure my water stays safe once it reaches my home or business?

It is possible for contamination to occur from outside sources after water passes through your meter prior to your consumption. A possible source of this type of contamination is from a **cross-connection** of your private water line with a separate source of contamination. For drinking water safety at your home or business, it is important for you to be aware of the dangers of **cross-connection** of pipes carrying drinking water from possible sources of contamination such as: wells, irrigation systems, fire sprinkler systems, industrial process water trains, boiler/cooling water, mop sinks, etc.

Connections of private wells to the public water system are regarded as a significant health hazard. Most of these types of connections occur near the customer's well pump. Often this type of cross-connection will occur at a location found underneath your home or near the well pump's discharge outlet. If you believe there is a chance this type of cross-connection exists at your home, please contact Mr. Brandon Webster at (615) 672-4110 x457. White House Utility District will inspect your home plumbing at no charge to help determine if a hazard exists.

What is a Cross-Connection?

When any contaminant source is directly connected to a public drinking water supply, whether permanently or temporarily, it is called a **cross-connection**. When a cross-connection exists, there are two common conditions that can occur to cause contamination. The first is referred to as **backpressure**. When a backpressure condition exists, there is higher pressure at the source of contamination than is supplied

by the District's water main. When this occurs, contaminated water is forced into the water main, thus contaminating the drinking water. The second condition, which is more likely to occur, is called **backsiphoning**. This situation may occur when there is a break in the water main or when there is an unusually high demand on the water distribution system. In this circumstance, a vacuum is created that can cause chemicals or other sources of contamination to be pulled into the water main. Backsiphoning can also occur when there is a significant pressure drop resulting in a very low pressure situation.

Cross-connections are best eliminated as a source of contamination by physically removing their connection to pipes that carry drinking water. **Backflow preventers** are devices that allow water to flow in only one direction. They are used to isolate **cross-connections** of possible contaminant sources from drinking water in cases where it is not feasible (or impossible) to physically remove the connection.

WHUD has specific policies regarding the severity of hazards posed by cross-connected contaminant sources and the method of safeguarding the public drinking water supply from those contaminants. If you have questions regarding cross-connections or backflow preventers for your home or business, please call (615) 672-4110 x457.

How can I get involved?

Our Water Board meets quarterly on the last Tuesday of the months of March, June, September, and December at 9:00 a.m. at the WHUD office located at 3303 Highway 31-W in White House.

For more information about your drinking water, please call Jack Amburgey at (615) 672-4110 x250. You can also visit our web site at www.whud.org.

Water Quality Data

How do I interpret the following chart?

The following chart contains information about contaminants detected in your drinking water. Maximum allowable levels and goals for levels set by the EPA are listed along with the units of concentration. Also, the concentration of each contaminant detected in your drinking water is listed. Data contained in the chart is from sampling performed in the 2007 calendar year.

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Important Definitions

- **AL** - Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **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.
- **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 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.
- **NTU** - Nephelometric Turbidity Unit - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is undetectable to the average person.
- **ppb** - Parts per billion or Micrograms per liter - explained as a relation to time and money as one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **ppm** - Parts per million or Milligrams per liter (mg/l) - explained as a relation to time and money as one part per million corresponds to one minute in two years or a single penny in \$10,000.
- **TT** - Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

Contaminant	Violation Yes/No	Max Level Detected	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Chlorine	NO	2.21 Avg.	1.7 – 2.7	2007	ppm	MRDLG = 4	MRDL = 4	Added as a disinfectant to control microbes
Copper ¹	NO	0.22		2005	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	NO	1.6		2007	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
HAA5	NO	45 Avg.	33 – 60	2007	ppb		60	By-product of disinfection
Lead ¹	NO	1.8		2005	ppb	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
Sodium	NO	7.9	7.9	2007	ppm			Erosion of natural deposits
TOC ²	NO	1.37 Avg.	1.1 – 1.6	2007	ppm		TT	Naturally present in the environment
Total Coliform Bacteria	NO	0		2007		0	<5% positive samples	Naturally present in the environment
TTHM (Total trihalomethanes)	NO	65 Avg.	35 – 95	2007	ppb		80	By-product of drinking water chlorination
Turbidity ³	NO	0.12	.03 – .12	2007	NTU		TT	Soil runoff

¹ During the most recent round of lead testing, 0 out of 31 households sampled contained concentrations exceeding the action level of 15 ppb. No copper samples exceeded the action level of 1.3 ppm.

² Treatment technique requirements were met for Total Organic Carbon in 2007.

³ We met the treatment technique for turbidity with 100% of monthly samples being below the limit set by the EPA of 0.3 NTU. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Due to the drought the Southeast experienced in 2007, some of our customers could have received water that was treated and tested by Gallatin Public Utilities. For this reason, the information on this page has been supplied by Gallatin Public Utilities. The water, which is surface water, comes from Old Hickory Lake. During the past year, numerous tests have been conducted by Gallatin Public Utilities for contaminants that may be present in drinking water. Only 12 were detected, and all were found to be at safe levels. WHUD also performs additional monitoring on this water before it reaches our customers.

Gallatin Public Utilities
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Contaminant	Highest Level Allowed (MCL)	Ideal Goals (MCLG)	Highest Level Detected	Range of Detections	Units	Date	Sources of Contamination
<u>MICROBIOLOGICAL CONTAMINANTS:</u>							
Total Coliform	<5% Positive Samples	0	0	1			Naturally present in the environment
<u>INORGANIC CONTAMINANTS:</u>							
Barium	2	2	0.023		ppm	Sep-02	Erosion of natural deposits
Copper	1300	AL=1300	270	20-420	ppb	Aug-05	Corrosion of household plumbing
Fluoride	4	4	0.9975	0.976 - 1.03	ppm		Water additive for strong teeth
Lead	15	AL=15	4.3	BDL - 6.4	ppb	Aug-05	Corrosion of household plumbing
Nitrate	10	10	0.38		ppm	Jan-07	Runoff from fertilizer use
Turbidity	TT (99.95% <0.5 NTU)	TT	0.05 (AVE)	0.03 - 0.36	NTU		Soil runoff
Chlorine	MRDL=4	MDRLG=4	1.92 (AVE)	1.58 - 2.11	ppm		Water additive used for disinfection
<u>UNREGULATED CONTAMINANTS:</u>							
Sodium			7.5		ppm	Mar-07	Erosion of natural deposits
<u>VOLATILE ORGANIC CONTAMINANTS:</u>							
TTHM	80	0	47 (AVG)	27 - 58	ppb		By-product of drinking water chlorination
HAA5	60	0	40 (AVG)	27 - 80	ppb		By-product of drinking water chlorination
TOC	TT	TT	1.6 (AVE)	1.4 - 1.9	ppm		Naturally occurring in environment

Listed above are 12 contaminants detected in Gallatin's drinking water in 2007. All are below allowed levels. Not listed are the hundreds of other contaminants for which we tested, but were not detected.

The Treatment Technique requirements for Total Organic Carbon were met in 2007.

Definitions:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health

ppm - one part per million

ppb - one part per billion

ND - Not Detected

pCi/L - Picocuries per Liter is the measure of radioactivity in water.

Action Level: The concentration of a contaminant that trigger treatment or other requirement that a water system must follow. Action levels are reported at the 90th percentile for homes at greatest risk. Out of 30 samples collected we had zero (0) exceed the lead or copper Action Level.

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

Turbidity: Turbidity does not pose any risk to your health. We monitor turbidity, which is the measure of the cloudiness of water, because it is a good indicator that our filtration system is functioning properly. **NTU:** Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.

TTHM: Total Trihalomethanes

HAA5: Halo Acetic Acids

TOC: Total Organic Carbon

Most of the data presented in this table is from testing done between **January 1, 2007** and **December 31, 2007**. We monitor for some contaminants less than once per year, for these contaminants, the last sample date is shown in the table.



White House
Utility District

WATER & WASTEWATER

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