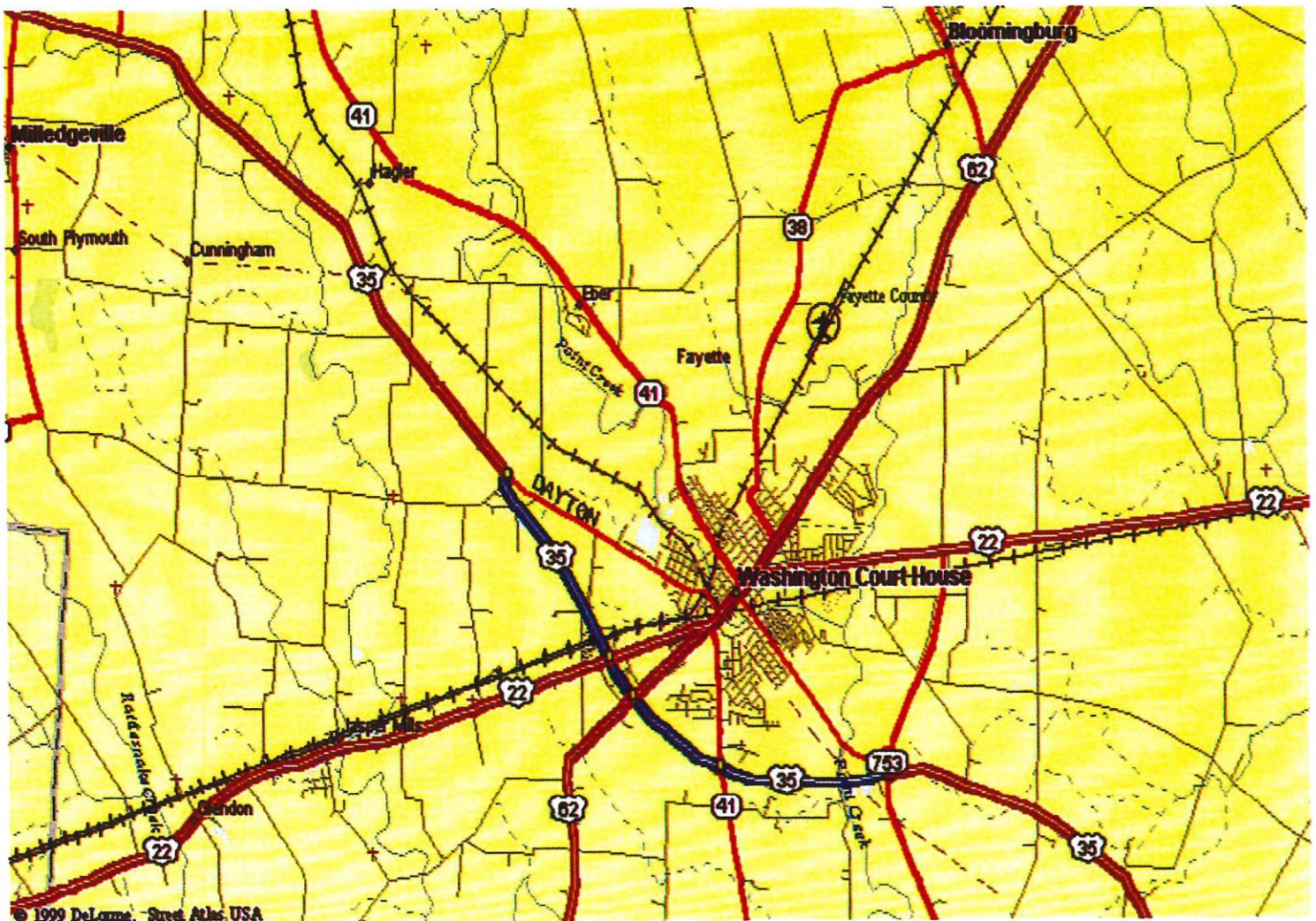


# City of Washington Court House Water Quality Report

*Drinking Water Consumer Confidence Report for 2016*



**TO ALL RESIDENTS**



## Drinking Water Consumer Confidence Report For 2016

To comply with the Safe Drinking Water Act, the City of Washington Court House has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. The City of Washington Court House Water Department's goal has been to provide a safe, clean, economical and dependable water product. This brochure is a summary of last year's water quality and included within this report is general health information, water quality test results, water sources, and how to participate in the decisions concerning your drinking water.

The annual average precipitation for Fayette County is 37.5 inches. The year 2016 was an average year and provided 34.9 inches of precipitation. The reservoirs and farm wells did provide a sufficient supply to meet all the City's water demands. The City farm wells were brought on line and were in service for only a short period of time. Several residential wells were monitored and no impact was recorded.

The City is being monitored for HAB's, (harmful algae blooms) for both reservoirs. To date no samples have come back with any detects. Consuming water containing concentrations of microcystins over the action level may result in abnormal liver function, diarrhea, vomiting, nausea, numbness or dizziness. Children younger than school age, pregnant women, nursing mothers, the elderly, immune-compromised individuals, those with pre-existing liver conditions and those receiving dialysis treatment may be more susceptible than the general population to the health effects of microcystins.

Security continues to be an on going process. City water assets (water towers, mains, wells & reservoirs) are constantly being evaluated and monitored. Our number one priority is providing safe drinking water and protecting the public health. City employees are committed to providing you with a safe and dependable water supply.

Reflecting back on the year 2016 here are some highlights of the Water Distribution Crew: 24 services were renewed, 7 valve boxes repaired, flushed 862 hydrants, 2 new services and 8 main break repairs. The back flow prevention program was implemented to insure the integrity of the water system. All, back flow devices are inspected yearly by a certified technician. (Dana Brigner) The annual hydrant- flushing program continues to help maintain adequate fire flows and water quality. We strive for a proactive approach to operating and maintaining our water distribution system to alleviate problems before they occur.

The City of Washington Court House has one surface water treatment plant (3 million gallon per day design capacity). The process typically introduces lime for softening, chlorine for disinfection and filtration for turbidity removal. The City of Washington Court House public water system uses surface water drawn from Paint Creek as well as ground water pumped from six water supply wells. Paint Creek is a natural flowing stream, winding through several adjacent counties. (Madison, Fayette, Highland & Ross) Approximately, two-thirds of our water needs are supplied by Paint Creek (surface) and the remaining one-third comes from the well field. (ground) Four wells are located, in the North-end, behind the water plant and two wells are located on the farm adjacent to the YMCA. Areas around Paint Creek and the well field include a moderate number of potential contaminant sources (mega-dairy farms). **Agricultural run off is the primary contaminant source.** As a result, the drinking water supplied to the City of Washington Court House is considered to have a high susceptibility to contamination. The Water Dept. collected samples and had them analyzed for possible contamination. If a contamination event should occur we have two up ground reservoirs that can be isolated and operated independently. The wells are tested bi-annually and no contamination has been detected. In any event, the City Water Dept. is confident in supplying a safe and dependable drinking water.

To insure the safety of your drinking water, the City Water Department conducts over sixty water quality control tests daily. Various contaminants were analyzed last year and without exception your drinking water met all EPA standards. Drinking water, including bottled water may reasonably be expected to contain at least small amounts of some contaminants. The presence of minute concentrations of contaminants does not necessarily indicate that water poses a health risk. The sources of drinking water both tap water and bottled water includes 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.

OAC rule 3745-07-02 requires the holder of a Class III water license to be in charge of the water treatment plant. The Washington Court House water plant currently meets this requirement. Actually, the plant is staffed with three operators maintaining Class III status. Annual educational credits, mandated by the OEPA, were successfully completed by all plant personnel. All OEPA chemical and bacterial performance studies were passed. We have a current, unconditioned license to operate our water system.

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MCL's (maximum contaminant levels) are set at very stringent levels. 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 **1-in-a-million** chance of having the described health effects. 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 infection. 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 (1- 800-426-4791).

**Contaminants that may be present in untreated source water include:**

- A. Microbial** contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- B. Inorganic** contaminants, such as salts and metals, which can be naturally occurring or result from industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- C. Pesticides and herbicides**, which may come from a variety of sources such as agriculture, and residential uses.
- D. 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, and septic systems.
- E. Radioactive** contaminants, which can be naturally-occurring.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. More information about contaminants and potential health effects can be obtained by calling the EPA's **Safe Drinking Hot Line (1-800-426-4791)**.

**TABLE OF DETECTED CONTAMINATES**

Contaminants (Unit)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Turbidity (NTU)	N/A	TT	0.32	.05-.32	NO	2016	Soil runoff
Turbidity (% of samples meeting standard)	N/A	TT	100%	100%	NO	2016	Soil runoff
<b>Inorganic Contaminants</b>							
Barium (ppm)	2	2	.014	.014-.014	NO	2016	Drilling waste discharge and natural erosion
Nitrates (ppm)	10	10	1.62	.28-1.62	NO	2016	Runoff from fertilizer, erosion of natural deposits
Fluoride (ppm)	4	4	.36	.356-.356	NO	2016	Erosion of natural deposits
<b>Volatile Organic Contaminants</b>							
HAAS (ppb) Total Haloacetic Acids	0	60	13.1	<6-13.1	NO	2016	By-product of drinking water chlorination
TTHM's (ppb) Total Trihalomethanes	0	80	38.8	20.2-48.2	NO	2016	By-product of drinking water chlorination
Chloroform (ppb)	N/A	N/A	27.6	9.0 - 27.6	NO	2016	By-product of drinking water chlorination
Bromo-dichloromethane (ppb)	N/A	N/A	11.7	6.5-13.4	NO	2016	By-product of drinking water chlorination
Dibromo-chloromethane (ppb)	N/A	N/A	6.7	3.9 - 6.7	NO	2016	By-product of drinking water chlorination
Chlorine (ppm)	4 MRDL G	4 MRDL	1.67	.20-1.67	NO	2016	Disinfectant added to control microbial contaminants
TOC	N/A	N/A	3.65	2.5-4.31	NO	2016	Naturally present in the environment
<b>Lead and Copper</b>							
			<b>90th Percentile</b>	<b>No. Of Sites Found Above</b>	<b>Range Of Detection</b>	<b>Year</b>	
Copper (ppm) No Copper samples exceeded the 1.3 (ppm) Action Level	1.3	AL=1.3	.0426	0 -30	<.01 - .09	2016	Corrosion of household plumbing
Lead (ppb) 0 out of 30 samples were found to have lead levels in excess of 15 (ppb) Action Level	0	AL=15	0	0 -30	<2.0 - 3.2	2016	Corrosion of household plumbing
<b>Microbiological Contaminants</b>							
Total Chloroform Bacteria	0	2 or > Per Month	0	0	NO	2016	Naturally present in the environment

The value reported under "Level Found" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one (1) indicates a violation of the TOC removal requirements.

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The EPA requires regular sampling to ensure drinking water safety. During 2016, the Washington Water Dept. conducted sampling for bacteria, inorganic, synthetic organic, volatile organic chemicals and phytoplankton. Samples were collected for a total of **forty-seven** different contaminants most of which were not detected in the municipal water supply. No contaminants were detected at levels that exceeded federal standards. In addition, the local water staff collects and analyzes water samples daily to ensure quality and stability throughout the system. The table included in this report lists only the detected constituents in your drinking water.

**Definitions of terms and abbreviations used in the chart above:**

- **Maximum Contaminant Level Goal (MCLG):** the level of a contaminant below which there is no known or expected health risk. MCLGs allow for a margin of safety.
- **Maximum Contaminant Level (MCL):** 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.
- **Maximum Residual Disinfectant Level (MRDL):** level of disinfectant added for water treatment that may not be exceeded at the consumers tap.
- **Maximum Residual Disinfectant Level Goal (MRDGL)** the level of disinfectant below which there is no known or expected health risk. MRDLGs allow for a margin of safety
- **Action Level (AL):** the concentration which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **Treatment Technique (TT):** a required process intended to reduce the level of a contaminant in drinking water
- **Parts per Million (ppm):** or milligrams (mg/l) per liter are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.
- **Parts per Billion (ppb):** or micrograms (ug/l) per liter are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- **< symbol:** a symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.
- **NTU:** nephelometric turbidity unit; a measure of particles in water.

The following section will provide additional information that may help you understand the results reported in the contaminant table and associated health risks. First of all, turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. It may interfere with the disinfect properties of chlorine and hide certain bacterial contaminants. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported above, the City of Washington's highest recorded turbidity result for 2016 was **0.32 NTU (in only 1 sample for the year)** and lowest monthly percentage of samples meeting the turbidity limits was **100%**. The yearly turbidity average was **0.12 NTU**, well below EPA requirements. In addition, over **240** bacteria samples were collected and analyzed, with all results being negative for coliform and e. coli bacteria.

**About Nitrates:** Nitrate is a chemical used in land fertilization and Fayette County has a large agricultural industry. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. Nitrates in drinking water at levels above **10 ppm** are a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. If you are caring for an infant you should ask advice from your health care provider. To minimize the concentrations of nitrates and insure a high quality of drinking water we pump only low nitrate source water into the reservoirs. This diversion policy also reduces the impact of any agricultural pesticide or herbicide. The highest level detected during 2016 was **1.62 ppm**. (1 0 ppm is the MCL)

**About Lead:** "If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Washington Court House Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in your drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at <http://www.epa.gov/safewater/lead>." For your information, The City of Washington Court House Water Department has been in compliance with all EPA requirements concerning lead action levels (**15 ppm**). Without exception, all lead detects have been the result of internal plumbing. (ex. New faucets or other water devices containing lead washers or lead solder)

The plant, did received a Tier 3 monitoring violation during 2016. The water plant failed to take the sample for cryptosporidium, turbidity and ecoli within the allotted time frame between 10/12/16 - 10/16/16. The sample was taken and sent in for testing on 10/11/16, with good results yet was simply taken a day early and the results were considered invalid. We are required to take these samples to determine if additional treatment of our source water is needed. Though this was not an emergency, as our customers you have a right to know what happened and what we did to fix that problem. There is nothing you need to do at this time. You do not need to boil your water or take any other action at this time. That sample will be tested for again at the end of the testing period in 2018. We are pleased to inform the public that no treatment or distribution violations occurred in 2016. Some complaints were associated with the aesthetics of water quality. Taste, odor, and color became more apparent with main flushing and warm water algae blooms. The flushing of dead end mains, increased carbon dosage, and reservoir treatment will usually eliminate the problem. Operation of the new reservoir has also contributed to a higher water quality.

The purpose of this report was to advance consumer understanding of drinking water and the need to protect water resources. Do you desire more information on the Washington Court House Water System? If so, City Council meetings are regularly scheduled on the 2nd and 4th Wednesdays of each month. In addition, you may contact the water department directly at the following telephone number- **636-2382 or the Safe Drinking Hot Line at 1-800-426-4791.**

**Our commitment to you is a safe and reliable drinking water.**