

Annual Drinking Water Quality Report
Chesterfield Water Department
2012

Our Commitment to You:
Safe, Reliable Drinking Water

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

Origin of our Water

We're pleased to provide you with this year's Annual Quality Water Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. Your drinking water originates from three municipal wells. Well No. 1 is 100 feet deep and has a capacity to pump 620 gallons per minute and is located inside the treatment plant at 419 Pearl Street.

Well No. 3 is 132 feet deep and has a capacity to pump 363 gallons per minute. It is located just southeast of the treatment plant.

Well No. 4 is 115 feet deep and has the capacity to pump 792 gallons per minute. It is located just south of the treatment plant.

Once the water is pumped through these wells, the water enters the Town's water treatment plant. The treatment plant accomplishes many functions. First, water enters the aerator where the raw water is exposed to oxygen to oxidize the iron and manganese. The water goes to the detention tank where iron and manganese settle out. Then fluoride is added to aid in the prevention of tooth decay and then enters the pressure filter for the purpose of iron removal. Then once the water is filtered, chlorine is added as a disinfectant to kill bacteria. After this process the water enters the distribution system where it travels through the system to the elevated 500,000 gallon storage tank, located at the southeast corner of Commerce and County Line Road.

The water department routinely monitors for constituents in your drinking water according to Federal and State laws. This shows the results of our monitoring for the period of January 1, 2012 to December 31, 2012. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

If you have any questions about this report or concerning your water utility, please contact the Town Of Chesterfield at (765) 378-3331, or operator Dustin Bennett at (765) 378-3331, Monday through Friday 8:00 a.m. to 4:00 p.m. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held the first Monday of each month at 7:00 p.m.

The Town of Chesterfield is required to take bacteriological samples 3 times per month using a site sample plan that consists of four different areas throughout the town. Also, you will notice that there is far less testing for contaminants this year as opposed to last year because the town is granted quarterly and yearly waivers on certain parameters because of detects far less than the MCL or no detects whatsoever, it will vary from year to year.

We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

"All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are manmade. Those constituents can be microbes, organic or inorganic chemicals, or radioactive material."

All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCL's 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 one-in-a-million chance of having the described health effect.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). Please call our office if you have questions.

We at the Town of Chesterfield work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Sincerely,

Dustin Bennett
Water Superintendent

Terms and Abbreviations

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) – laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) – one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter – one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nano grams per liter (Nano grams/l) – one part per trillion corresponds to one minute in 2,000,000 years or single penny in \$10,000,000,000.

Parts per quadrillion (ppq) or Pico grams per liter (pic grams/l) – one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Pico curie per liter (pci/l) – Pico curies per liter is a measure of the radioactivity in the water.

Milligrams per year (mrem/yr) – measure of radiation absorbed by the body.

Million Fibers per liter (MFL) – million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) – nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level – the concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT) – (mandatory language) a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level – (mandatory language) the "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal – (mandatory language) The "Goal" (MCLG) is 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 Residential Disinfectant Level, the highest level of disinfectant allowed in drinking water.

MRDLG: Maximum Residential Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected risk to health.

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

Inorganic contaminants: such as salts and metals, this can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides: This may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants: including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants: This can be naturally-occurring or be the result of oil and gas production and mining activities.

Potential violation, one that is likely to occur in the near future once the system have sampled for four quarters. (P*)

**Section 1 – Contaminants Detected
Inorganic Contaminants**

Date	Contaminant	MCL	MCLG	Units	Result	Min	Max	Violates	Likely Sources
2012	Barium	2	2	ppm	0.688			No	Discharge of drilling wastes: Discharge from metal refineries; Erosion of natural deposits
2012	Copper	1.3(AL)	1.3	ppm	0.148			No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
2012	Fluoride	4	4	ppm	0.8			No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
2012	Lead	15(AL)	0	ppb	0.7			No	Corrosion of household plumbing systems; Erosion of natural deposits
2012	Nitrate (as N)	10	10	ppm	0.12			No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
2012	Arsenic	10	0	ppb	0.6			No	Erosion of natural deposits; Runoff from Orchards; Runoff from glass and electronics Production wastes.

Disinfection By-products & Precursors

Date	Contaminant	MCL	MCLG	Units	Result	Min	Max	Violates	Likely Sources
2012	Total Haloacetic Acids (haa5)	60	No goal for this total	ppb	2	1.5	1.5	No	By-product of drinking water chlorination
2012	Total Trihalomethanes (tthm)	80	No goal for this total	ppb	18	18	18	No	By-product of drinking water chlorination

Unregulated Contaminants

Date	Contaminant	MCL	MCLG	Units	Result	Min	Max	Violates	Likely Sources
1/6/2010	Sodium	n/a		mg/l	15.8			No	Erosion of natural deposits; Leaching

Radiological Contaminants

Date	Contaminant	MCL	MCLG	Units	Result	Min	Max	Violates	Likely Sources
9/23/2009	Gross Alpha excluding Radon & Uranium	15	0	pci/l	0.9	0.9	0.9	No	Erosion of natural deposits
9/23/2009	Beta/Photon Emitters	4	0	mrem/yr	0.3	0.3	0.3	No	Decay of natural and man-made deposits

Residual Disinfectant

Date	Contaminant	MCL	MCLG	Units	Result	Min	Max	Violates	Likely Sources
2012	Chlorine Residual	4 MRDL	4 MRDLG	ppm	1	1	1	No	Water additive (disinfectant used to control microbiological organisms)