

2008 Safe Drinking Water Report



The Butler County Water and Sewer Department (BCWS) has prepared this consumer confidence report to provide information to you on the quality of your drinking water.

Your drinking water has consistently met or surpassed all water quality standards required by both the United States and Ohio Environmental Protection Agencies.

Please share this report with renters or others who do not receive water bills. If you need more copies, please contact us.



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ECCR02

WHERE DOES MY DRINKING WATER COME FROM?

BCWS purchases treated drinking water that we deliver to you from two suppliers:

- City of Hamilton, which supplies ground water
- Greater Cincinnati Water Works (GCWW), which supplies ground and surface waters

BCWS also protects its system through several auxiliary connections with GCWW, Warren County and the cities of Hamilton, Mason and Monroe to ensure a supply during emergency conditions. BCWS did not use these emergency connections in 2008.

BCWS' license status is "Licensed without Conditions". This means that our water system is operating properly and has passed inspection during the last sanitary survey from Ohio EPA.

GROUND WATER PROTECTION

The Great Miami Buried Valley Aquifer (GMBVA) is one source of our water, and while it is a very high-quality aquifer, it is highly susceptible to contamination. The Ohio EPA has determined that the absence of a protective clay layer, the shallow depth of the water table, the presence of nearby pollutant sources and the fact that there are low levels of nitrates in the ground water make the aquifer vulnerable to contamination.

BCWS partners with the Hamilton to New Baltimore Ground Water Consortium (www.gwconsortium.com) which administers an award-winning Wellhead Protection Program to prevent contamination from entering the aquifer.

SURFACE WATER PROTECTION

Some of the water we deliver is from the Ohio River. All surface waters, including the Ohio River have been classified by Ohio EPA as highly susceptible to contamination. The Ohio River is susceptible because it is open to the environment and pollution may spread quickly with the flow of the river.

Our supplier GCWW, works with the Ohio River Valley Water Sanitation Commission (ORSANCO) and other utilities to monitor contamination in the river. There are several barriers between potential pollution and your tap water. These include turning off the intake until pollution passes and altering treatment processes. Another barrier is granular activated carbon used as part of the treatment process which is recognized as the best available technology for removing common chemicals found in the Ohio River.

YOU CAN HELP PROTECT YOUR WATER

Individuals play an important role in protecting ground water from contamination and costly cleanup. Help safeguard your water source by properly using and disposing of materials. For more information on how and where to properly dispose of household hazardous waste, including unused pharmaceutical products, please contact the Butler County Solid Waste District at (513) 887-3653.

SECURITY

Security is always a priority in providing high quality water to our community. A diligent sampling and monitoring program is part of standard operations throughout the entire water system. If you see any suspicious persons, vehicles, activities or know of a threat to any of our facilities, please call (513) 887-3066.

WATER THEFT

Under Ohio law, unauthorized connection to the water or sewer service or tampering with meters or utility equipment is theft and could result in criminal prosecution.

HEALTH INFORMATION

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 at 1-800-426-4791.

LEAD

BCWS monitors for lead in our distribution system and all the results have met EPA-approved regulatory levels. However, it is possible that lead levels in your home will be higher than in other homes in the community because of your home's pipes and plumbing fixtures. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. BCWS is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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 by an independent certified laboratory. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or on the web at www.epa.gov/safewater/lead.

CRYPTOSPORIDIUM

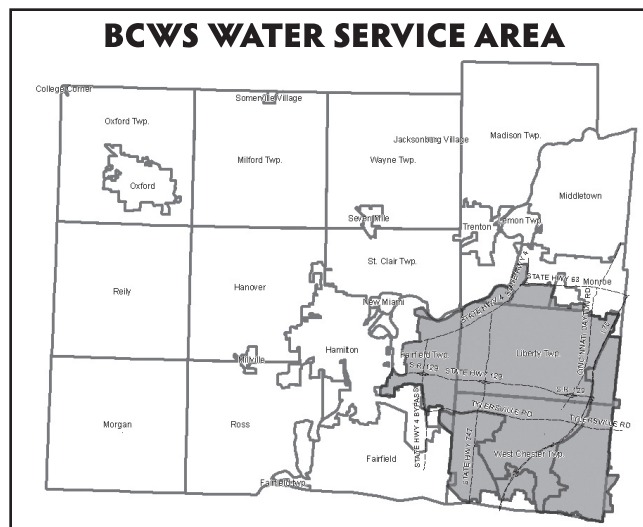
BCWS' surface water supplier, GCWW, has monitored for Cryptosporidium in their treated water and has never detected it. GCWW also tested for Cryptosporidium in the Ohio River source water and it was not found during 2008. Cryptosporidium is a microscopic organism that when ingested can result in diarrhea, fever and other gastrointestinal symptoms. The organism is found in surface waters and comes from animal and human wastes which enter the watershed. Cryptosporidium is eliminated by an effective combination of treatment processes including sedimentation, filtration and disinfection.

DISTRIBUTION SYSTEM MONITORING

The USEPA required BCWS to conduct an evaluation of the disinfection and disinfection by-products of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system with elevated disinfection by-product concentrations. Beginning in 2012, BCWS may use the locations selected for the IDSE for compliance monitoring under Stage 2 of the Disinfection By-Products Rule.

Disinfection by-products are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water.

Disinfection by-products are grouped into two categories – Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). USEPA sets standards for controlling disinfectant levels and by-products in drinking water, including both TTHMs and HAA5s.



BCWS MEETS ALL HEALTH STANDARDS

BCWS continues to bring you a plentiful supply of the highest quality water. Your water has consistently met all state and federal health standards for drinking water.

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 human activity.

Contaminants that may be present in 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 urban storm runoff, 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, urban storm water runoff, 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, urban storm water runoff, and septic systems; (E) 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, the USEPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (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 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.

BECOME INVOLVED IN WATER DECISIONS

We encourage public comment on decisions affecting drinking water. The Butler County Board of Commissioners' meetings are open to the public and are held on Mondays and Thursdays. Please call 513-887-3247 for details. If you have questions or comments about this report or other issues, please contact us by mail, through our Web site at www.butlercountyws.org or by phone at (513) 887-3066.

FOR ADDITIONAL DRINKING WATER INFORMATION, PLEASE VISIT THE FOLLOWING WEBSITES:

- OEPA Division of Drinking and Ground Water: www.epa.state.oh.us/ddagw
- Source Water Assessment and Protection Program: www.epa.state.oh.us/ddagw/pdu/swap.html
- EPA Safe Drinking Water Hotline: 1-800-426-4791 www.epa.gov/safewater www.epa.gov/safewater/protect.html

The chart below shows the water testing results for 2008 which had detectable results and how they compare to federal and state standards. Some of the data is more than one year old but is still accurate. The Ohio EPA requires monitoring for these substances less than once per year because the concentrations of these contaminants do not change frequently.

Regulated Substances which are subject to an action level, MCL or a treatment technique

Substances Found (units)	MCLG (ideal goal)	MCL (Level Allowed)	Compliance Level	Range of Detections	Is this a Violation?	Sample Year	Typical Sources
Microbiological contaminants							
Turbidity (NTU)	n/a	TT <1 NTU max and <0.3 NTU 95% of the time	0.11 100% <0.3 NTU	0.05 - 0.11	No	2008	Soil runoff.
Total Organic Carbon (ppm)	n/a	TT ¹ (value >1 indicates compliance)	2.34	1.75 - 3.04	No	2008	Naturally present in the environment.
Inorganic Contaminants							
Lead (ppb)	0	AL = 15	2.8 (Two sites of 51 sites sampled exceeded the AL)	n/a	No	2008	Corrosion of household plumbing systems; erosion of natural deposits.
Copper (ppm)	1.3	AL = 1.3	0.0298 (No sites exceeded the AL)	n/a	No	2008	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride (ppm)	4	4	0.98	0.36 - 1.25	No	2008	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	3.33	<0.10 - 3.33	No	2008	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium (ppm)	2	2	0.0359	0.0203 - 0.0359	No	2008	Discharge of drilling wastes, Discharge from metal refineries, Erosion of natural deposits
Selenium (ppb)	50	50	2.05	nd - 2.05	No	2008	Erosion of natural deposits, Discharge from petroleum and metal refineries
Chromium (ppb)	100	100	1.79	1.38 - 1.79	No	2008	Erosion of natural deposits, Discharge from steel and pulp mills
Volatile Organic Contaminants							
Total Trihalomethanes (ppb)	n/a	80	35.07	6.83 - 57.01	No	2008	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	n/a	60	6.28	1.84 - 12.02	No	2008	By-product of drinking water disinfection
Radioactive Contaminants							
Gross Beta (pCi/L)	0	AL = 50	24	nd - 24	No	2007	Decay of natural and man made deposits
Residual Disinfectants							
Total Chlorine (ppm)	MRDLG = 4	MRDL = 4	0.82	0.74 - 0.82	No	2008	Water additive used to control microbes
Chlorine Dioxide (ppb)	MRDLG = 800	MRDL = 800	660	10 - 660	No	2008	Water additive used to control microbes.
Chlorite (ppm)	0.8	1	0.66	0.12 - 0.74	No	2008	Byproduct of Drinking water chlorination
Stage 2 D/DBP Rule IDSE							
Total Trihalomethanes (TTHM IDSE) (ppb)	n/a	80	n/a	nd - 72.6	n/a	2006	By-product of drinking water chlorination
Haloacetic Acids (HAA5 IDSE) (ppb)	n/a	60	n/a	nd - 24.81	n/a	2006	By-product of drinking water chlorination
Unregulated Substances for which EPA requires monitoring							
Substances Found (units)	MCLG (ideal goal)	MCL (Level Allowed)	Average level detected	Range of Detections	Is this a Violation?	Sample Year	
Bromodichloromethane (ppb)	n/a	n/a	3.95	2.77 - 7.36	n/a	2008	
Dibromochloromethane (ppb)	n/a	n/a	6.56	2.60 - 17.2	n/a	2008	
Bromoform (ppb)	n/a	n/a	3.94	0.45 - 13.7	n/a	2008	
Chloroform (ppb)	n/a	n/a	2.03	<0.5 - 3.17	n/a	2008	
Haloacetic Acids HAA5 (ppb)	n/a	60	2	<6.0 - 4.48	No	2008	
Sulfate (ppm)	n/a	250 (SMCL)	65.8	48 - 119	No	2008	

TT¹ - The value reported under "highest compliance level detected" 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 >1 indicates that the water system is in compliance with TOC removal requirements. A value of <1 indicates a violation of the TOC removal requirements.

DEFINITIONS

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

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 Contaminant Level Goal (MCLG) - 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.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - 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 contamination.

Secondary Maximum Contaminant Level (SMCL) - Established as guidelines for aesthetic considerations such as taste, color, and odor.

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

Turbidity - We are required to report on the turbidity as an indication of the effectiveness of our filtration system. Turbidity is a measure of the cloudiness of water. The turbidity limits set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed one NTU at any time. As reported in the table, GCWW's highest recorded turbidity result for 2008 was 0.11 NTU (Miller Water) and the lowest monthly percentage of samples meeting the turbidity limits was 100%.

- IDSE** - Initial Distribution System Evaluation
- n/a** - Not applicable. There is no set MCL, MCLG or the test is not required.
- nd** - Not detectable at testing limits
- NTU** - Nephelometric Turbidity Units- A unit of measure for the size and concentration of particles in water
- pCi/L** - picoCuries per liter, a measure of radioactivity in water
- ppm** - Parts per million- A part per million corresponds to one second in a little over 11.5 days
- ppb** - Parts per billion- A part per billion corresponds to one second in 31.7 years
- OEPA** - Ohio Environmental Protection Agency
- USEPA** - United States Environmental Protection Agency
- <** - symbol meaning "less than"- Example: A result of <5 means that the lowest level that could be detected was 5 and the contaminant was not detected in that sample.
- >** - symbol meaning "greater than"- Example: The Treatment Technique used for Total Organic Carbon TOC must be a number greater than 1 to be in compliance.

