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# Annual WATER QUALITY REPORT

Reporting Year 2011

Presented By  
**Clermont County Water**

PWS ID#: 1302212

## Working Hard For You

This brochure is a summary of the quality of water we provided last year (2011). Included are details about where your water comes from, what it contains, and how it compares with U.S. Environmental Protection Agency (EPA) standards. We want you to be informed. We know you count on us for a safe and reliable source of water every day, and we are dedicated to providing a high-quality product to you. If this report was mailed to you as owner of a property whose occupants drink Clermont County Water System water, please forward this report to those residents.

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may 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 may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## QUESTIONS?

Questions about the water system, which has been in operation since 1955, may be directed to Mark Day at (513) 732-7945.

## Source Water Description

The Clermont County Water System operates three water treatment plants that pump into a common distribution system of pipes serving our customers. The MGS plant, located near Miamiville, draws from wells in the Little Miami River Aquifer. In 2004, the Ohio EPA performed a source water assessment for the MGS wellfield and designated it as highly susceptible to contamination. This designation is based in part on the geology of the aquifer, which is shallow and has little or no impermeable materials atop it. Another factor is the presence of potential sources of pollution in the area. The Ohio EPA also notes the presence of nitrates in the water, which suggests man-made influence in the aquifer. However, the water continues to meet drinking water standards. These wellfields are monitored for contamination and cared for under an Ohio-EPA-endorsed Wellhead Protection Plan.

The PUB plant is near New Palestine, where its wells draw from the Ohio River Valley Aquifer. A susceptibility analysis from the Ohio EPA has determined that this aquifer has a high susceptibility for contamination, based on a relatively thin layer of low-permeability material overlying the aquifer, and the relatively shallow depth of the aquifer. Potential pollution sources in the area and a possible hydraulic connection to the Ohio River also contribute to this assessment. However, the EPA agrees that there is no evidence of existing chemical contaminants. These wellfields are monitored for contamination and cared for under an Ohio-EPA-endorsed Wellhead Protection Plan. People who wish to learn more may call Mark Day at (513) 732-7945.

The Bob McEwen Water Treatment Plant (BMW) is located near Batavia and draws surface water from Harsha Lake, which was created by constructing a dam across the East Fork Little Miami River. Surface water is more susceptible to contamination than groundwater, so extensive testing of the raw water is conducted frequently. Chemical and bacteriological testing, as well as evaluation of the biological organisms living upstream of the lake, is used to determine raw water quality and identify areas of concern. The Ohio EPA completed a source water assessment for BMW in 2004. The protection area around Harsha Lake and the upstream portions of the East Fork Little Miami River includes a number of commercial and industrial facilities, but the greater concern is runoff from agricultural fields, the potential for spills at road and rail crossings, and residential septic systems in the watershed. People who wish to learn more may contact Eric Heiser at (513) 732-5386. Additional information on the watershed collected by Clermont County is available from the Office of Environmental Quality (OEQ) at (513) 732-7894 or on the Web at <http://www.oeq.net>. After treatment, which includes Granular Activated Carbon filtration, water from the lake meets all required drinking water standards.

## Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Note: We have a current, unconditioned license to operate our water system.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Atrazine (ppb)	2011	3	3	0.2	ND-0.64	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2011	[4]	[4]	0.88	0.2-3.1	No	Water additive used to control microbes
Fluoride (ppm)	2011	4	4	1.22	0.23-1.22	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2011	60	NA	25	ND-40	No	By-product of drinking water disinfection
Nitrate (ppm)	2011	10	10	1.88	ND-1.88	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	46	9-113	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] <sup>1</sup> (removal ratio)	2011	TT	NA	1.51	1.23-1.83	No	Naturally present in the environment
Turbidity <sup>2</sup> (NTU)	2011	TT	NA	0.340	0.031-0.340	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2011	TT	NA	99.5	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2011	1.3	1.3	0.423	0/52	No	Corrosion of household plumbing systems; Erosion of natural deposits

<sup>1</sup>The value reported under Amount Detected for 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 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

<sup>2</sup>Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

## Definitions

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

**Amount Detected:** The worst-case number derived from our testing data that is directly comparable with the requirement (MCL or AL or TT).

**MCL (Maximum Contaminant Level):** 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.

**MCLG (Maximum Contaminant Level Goal):** 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.

**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 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.

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**removal ratio:** A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

## Public Meetings

The Clermont County Board of County Commissioners owns and operates the Clermont County Water System. Information relative to meeting dates and times can be found by visiting the County Web site at [www.clermontcountyohio.gov](http://www.clermontcountyohio.gov), or by calling (513) 732-7300.



### Who uses the most water?

On a global average, most freshwater withdrawals—69 percent—are used for agriculture, while industry accounts for 23 percent and municipal use (drinking water, bathing and cleaning, and watering plants and grass) just 8 percent.

### How much water does a person use every day?

The average person in the U.S. uses 80 to 100 gallons of water each day. During medieval times, a person used only 5 gallons per day.

### Should I be concerned about what I'm pouring down my drain?

If your home is served by a sewage system, your drain is an entrance to your wastewater disposal system and eventually to a drinking water source. Consider purchasing environmentally friendly home products whenever possible, and never pour hazardous materials (e.g., car engine oil) down the drain. Check with your health department for more information on proper disposal methods.

### How long does it take a water supplier to produce one glass of water?

It can take up to 45 minutes to produce a single glass of drinking water.

### How much emergency water should I keep?

Typically, 1 gallon per person per day is recommended. For a family of four, that would be 12 gallons for 3 days. Humans can survive without food for 1 month, but can only survive 1 week without water.

### Where does a water molecule spend most of its time on Earth?

In a 100-year period, a water molecule spends 98 years in the ocean, 20 months as ice, about 2 weeks in lakes and rivers, and less than a week in the atmosphere.

### How many community water systems are there in the U.S.?

About 53,000 public water systems across the United States process 34 billion gallons of water per day for home and commercial use. Eighty-five percent of the population is served by these systems.

## Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

Lead and copper testing was conducted in 2011 by Clermont County Water in 52 homes that were identified as being at risk for having higher levels of those contaminants. The samples were of water that had sat in the homes' water lines overnight. None of the samples contained lead. Some did contain copper, but all at concentrations well below the action level set by the EPA.

## Water Hardness

Water hardness is not regulated and does not appear on the table. Each of our three water treatment plants produces waters of differing hardness, which mix in the common piping system. In general, if you live in Pierce or Union Township, you receive water with a hardness of 10.5 grains per gallon (180 ppm). In Batavia, Stonelick, and Goshen townships, the water has 7 grains per gallon (120 ppm) of hardness. In Miami Township, blending of two waters is possible, but the softer water is more likely. In northern Miami Township, 12 grains per gallon (200 ppm) is prevalent; in southern Miami Township, the hardness could be as low as 7 grains per gallon (120 ppm).