

## **Wright State University Public Water System Drinking Water Consumer Confidence Report for 2008**

The Wright State University (WSU) Physical Plant Department and Department of Environmental Health and Safety have prepared this report to provide information to you, the consumer, on the quality of your drinking water. Included in this report are general health information, water quality test results, potential sources of drinking water contamination, and persons to contact regarding WSU's water system. This report is required by the 1996 amendments to the Safe Drinking Water Act. Regulations governing the content and other requirements for this report can be found in Federal rule 40 CFR 141.151 through 155.

### **What's the source of your drinking water?**

WSU operates its own public drinking water system that draws water from the Mad River Buried Valley Aquifer. The Water Supply Plant is located at the west end of Lot #20 adjacent to Kauffman Avenue. Ground water is delivered to the Water Supply Plant from two separate wells utilizing two well pumps at the northwest end of Lot #20. The well pumps and associated components were rebuilt in April 1998. The Water Supply Plant has supplied drinking water to the university since 1977.

Water drawn from the wells is treated at the Water Supply Plant by aeration, iron and manganese filtration, water softening, and chlorine disinfection. The Water Supply Plant is operated and maintained by university employees certified by the Environmental Protection Agency. WSU's Department of Environmental Health and Safety oversees the required sampling and analysis of the drinking water. In 2008 the Water Supply Plant produced 75.8 million gallons of potable water for the university. The Water Supply Plant supplies drinking water to WSU's main campus buildings, Hamilton Hall and the Rockafield House. Forest Lane and other student resident apartments receive their water from the City of Fairborn.

WSU has an emergency connection with the City of Fairborn for use during emergency conditions and only after approval from the city. Such emergencies include, but are not limited to: power failures, fires, maintenance or repairs, and severe drought. On average this connection is used three times a year with each use usually less than eight hours in duration. In 2008, WSU connected to the City of Fairborn water system while the water tower at WSU was painted. The City of Fairborn provided 8.24 million gallons of water to WSU in July and August. This report does not include information on the water supplied from the City of Fairborn. A copy of Fairborn's Consumer Confidence Report can be obtained by contacting the Fairborn Water Department at (937) 754-3097 or at the city's website ([fairborn.oh.us/water](http://fairborn.oh.us/water)), Fairborn, Ohio.

### **Has your Source Water been assessed?**

The 1996 Amendments to the Safe Drinking Water Act require the Ohio Environmental Protection Agency (OEPA) to conduct source water assessments for all Public Water Systems (PWS's). The assessment information will assist PWS's in understanding the potential threats to their water supply and help them protect their water supply. According to the OEPA Source Water Assessment Report for Wright State University, the aquifer that supplies drinking water to

WSU has a high susceptibility to contamination. This is due to the sensitive nature of the aquifer and the existing potential contaminant sources identified. This does not mean that this wellfield will become contaminated; only that conditions exist for the ground water to be impacted by potential contaminant sources. Future contamination may be avoided by implementing protective measures. Such measures are presently being developed by WSU.

### **What are sources of contamination to drinking water?**

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 human activity.

Potential contaminants 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 water 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 United States Environmental Protection Agency (EPA) promulgated regulations limiting the amount of certain contaminants in public water systems. 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 contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

### **Who needs 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 with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or some other immune system disorder, and 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 and Center for Disease Control 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).

## Is your drinking water monitored?

The EPA requires regular sampling to ensure drinking water safety. WSU is required to conduct sampling for certain bacteria, inorganic, synthetic organic, volatile organic and radiological contaminants as set forth by the EPA. Over the last five years (the required reporting time frame of this report) samples were collected for over 105 different contaminants (some more than once) most of which were not detected in WSU's drinking water supply. Over 1,085 water samples were taken in 2008.

Listed below is information on those contaminants that were detected in WSU's drinking water supply over the past five years. This data represents the most recent testing done in accordance with EPA regulations. No contaminant was detected at a level considered a violation by the EPA. Definitions for the terms used in the table are also listed.

### WATER QUALITY MONITORING INFORMATION

Contaminants (units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contamination
<b>INORGANIC CONTAMINANTS</b>							
Barium (ppm)	2	2	0.284	N/A	NO	2008	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Lead (ppb)	0	AL=15	< 5.0*	N/A	NO	2007	Corrosion of plumbing systems/ erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	0.225*	N/A	NO	2007	Corrosion of plumbing systems/ erosion of natural deposits
Fluoride (ppm)	4	4	0.67	N/A	NO	2008	Erosion of natural deposits/ possible discharge from fertilizer or aluminum factories
<b>VOLATILE ORGANIC CONTAMINANTS</b>							
TTHMs [Total Trihalomethanes] (ppb)	N/A	80	50.4	BDL-50.4	NO	2008	By-product of drinking water chlorination
Haloacetic acids [HAA] (ppb)	N/A	60	6.3	BDL-6.3	NO	2008	By-product of drinking water chlorination

\*The ninetieth percentile value of the most recent round of sampling. None of the total samples taken exceeded the AL.

The EPA also requires certain operational data to be monitored by water plant personnel. This includes water volume production rates, hardness levels, iron and manganese levels, and levels of chlorine in the water for disinfection. Information on operational data can be obtained by contacting the Physical Plant Department at (937) 775-2307 or (937) 775-3658.

## **Definitions:**

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

BDL (Below Detection Level) – The concentration of a contaminant is lower than the level of detection by current chemical tests.

MCLG (Maximum Contaminant Level Goal) – 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.

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

N/A - Abbreviation for “not applicable.”

ppb (parts per billion or micrograms per liter) – Unit of measure for concentrations of a contaminant. A part per billion corresponds to one second in 31.7 years.

ppm (parts per million or milligrams per liter) – Unit of measure for concentrations of a contaminant. A part per million corresponds to one second in a little over 11.5 days.

## **How can the public get more information or participate in decision making?**

Information concerning WSU's public water supply operation can be obtained by calling Cris Wadham, Plant Operations and Maintenance Manager, at (937) 775-2307 or John Bratton, Maintenance Services Supervisor, WSU Physical Plant at (937) 775-3658. Information concerning sampling and analysis of contaminants can be obtained by calling Richard Robertson, Environmental Health and Safety Specialist, WSU Department of Environmental Health and Safety at (937) 775-4275.