



Harold G. Huff, Director
Water Resources Department

PORTAGE COUNTY WATER RESOURCES
BRIMFIELD SYSTEM

“We have a current, unconditioned license to operate our water system”

2009 ANNUAL CONSUMER WATER QUALITY REPORT

Billing Information: 330-297-3670

Customer Service: 330-297-3685

24-Hour Number: 330-626-5283

This report is also available on our web site: www.portageco.com/waterresources.htm

Water Quality Exceeds Mark

Portage County Water Resources is committed to providing our customers with a safe and reliable supply of high quality drinking water. The water meets both state and federal standards for quality and safety. This annual “Consumer Confidence Report”, required by the Safe Drinking Water Act, explains where your water comes from, what the tests show about it, and other things you should know about drinking water.

Water Source

The Brimfield Water Treatment Plant (WTP), which provides drinking water service to the local Brimfield area, Ohio American Water, Rootstown Water Company, and as far north as the Meadowview Plaza in Ravenna uses ground water wells as its source. The plant produced 130.2 million gallons of water in 2009. In late 2008 the refurbishing of the existing manganese greensand filters began and will be completed by the end of this spring. The function of these filters is to remove iron and manganese compounds from the well water. To date, we have completed work on 83% of these filters. Our recently completed booster station will provide additional water during seasonal high flows and/or emergencies from the City of Ravenna surface water plant. In addition to the filters, an emergency generator was installed at the plant to further improve our efforts for uninterrupted water service. Projects for 2010 include additional computerized monitoring of chemical feed and disinfection process as well as upgrading and updating pump controls. As always, all of the improvements will continue to provide a high quality and adequate supply of water to our valued customers.

Source Water Protection

The sources of drinking water, for 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 can pick up substances resulting from the presence of animals or from human activity. The aquifer that supplies drinking water to the Brimfield area has a high susceptibility to contamination, due to the sensitive nature of the aquifer in which the drinking water wells are located and existing potential contamination sources identified. More information is available by calling 1-800-963-1292. Portage County Water Resources vigilantly safeguards its ground water supplies. Future contamination may be avoided by implementing



protective measures, and once again we are able to report that the department has never had a violation of a contaminant level or of any other water quality standard. 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 Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791). Contaminants which may become present in source water include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural or 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 runoff, and residential uses; (D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which can come from industry, 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.

Portage County Water Resources has actively monitored the area around its well field for twenty-seven (27) years to protect it from potential pollution. Ohio EPA has approved the Brimfield "Wellhead Protection Area Delineation" and has prepared a "Drinking Water Source Assessment" on the Brimfield well field area. This document can be found on our web site at www.portageco.com/waterresources.htm. There are presently no known sources of pollution affecting our ground water and we intend to use public education and regular monitoring to continually improve our protection program. We need the cooperation of everyone living and working in the area where our water originates to prevent contamination.

Special Information Available

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer who are undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, 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 ways to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791). 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. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Monitoring Violations

During the month of June, 2009, Portage County Water Resources failed to collect the required number of Total Coliform Bacteria samples as required by the Ohio EPA. The Water Department returned to compliance with bacteria sampling requirements in the month following. Portage County Water Resources has taken the following steps to correct this violation and prevent future violations from occurring: Modifications to operational procedures have been made that should ensure that future violations do not occur.



An Explanation of the Water Quality Data Tables

The following two (2) tables present the information on any regulated contaminant that was found to be present in any amount in the drinking water. Table A is for the water produced by the Brimfield WTP and would normally be in the distribution system serving the Brimfield, Ohio American, and Rootstown areas. Table B is for the water produced by the Ravenna WTP and purchased during emergencies.

TABLE A
2009 Brimfield Treated Water Quality
Detected Contaminates

Inorganic Contaminants							
Contaminant Units	MCL	MCLG	LEVEL FOUND	RANGE OF DETECTION	VIOLATION	YEAR SAMPLED	Sources of Contaminate
Fluoride (ppm)	4	4	1.0447	0.60-1.29	NO	2009	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer plants and aluminum factories
Copper (ppm) *	AL = 1.3	1.3	1.1	0.072 - 2.1	NO	2007	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb) **	AL= 15	0	4.1	0.0 – 4.90	NO	2007	Corrosion of household plumbing systems; Erosion of natural deposits
Chromium (ppb)	100	100	11	NA	NO	2007	Discharge from steel and pulp mills; Erosion of natural deposits
Barium (ppm)	2	2	0.068	NA	NO	2007	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Iron (ppm)	NA	NA	0.09	0.08 – 0.10	NO	2009	Naturally occurring deposits
Manganese (ppm)	NA	NA	0.03	0.03 – 0.04	NO	2009	Naturally occurring deposits
Hardness (ppm)	NA	NA	323.7	300 - 444	NO	2009	Naturally occurring deposits
Volatile Organic Contaminants							
HAA5 (ppb) HALOACETIC ACIDS	NA	60	10.1	<6.0-14.7	NO	2009	Byproducts of drinking water chlorination
TTHM (ppb) Total Trihalomethanes	NA	80	27.6	15.0-40.3	NO	2009	Byproducts of drinking water chlorination
IDSE 1 HAA5 (ppb)	NA	NA	NA	8.5-10.5	NO	2009	Byproducts of drinking water chlorination
IDSE 1 TTHM (ppb)	NA	NA	NA	15.0-29.1	NO	2009	Byproducts of drinking water chlorination
IDSE 2 HAA5 (ppb)	NA	NA	NA	7.4-9.1	NO	2009	Byproducts of drinking water chlorination
IDSE 2 TTHM (ppb)	NA	NA	NA	15.3-22.8	NO	2009	Byproducts of drinking water chlorination
Total Chlorine (ppm)	MRDL = 4	MRDL = 4	1.36	0.73-1.75	NO	2009	Water additive to control microbes



TABLE B
2009 Ravenna Treated Water Quality
Detected Contaminants

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources In Drinking Water	Violation
Inorganic Contaminants								
Nitrate	2009	ppm	10	10	0.49	0.10- 0.49	Runoff from fertilizer, Leaching from septic tanks, Sewage; Erosion of natural Deposits	NO
Fluoride	2009	ppm	4	4	1.03	0.90-1.13	Erosion of natural deposits: Water additive.	NO
Copper	2009	ppm	1.3 AL	1.3	0.42	0-1.10	Corrosion of household plumbing systems. Erosion of natural Deposits	NO
No samples exceeded AL					90%-0.42			
Lead	2009	ppb	15 AL	0	12.0	0 – 93	Corrosion of household plumbing systems. Erosion of natural Deposits	NO
No samples exceeded AL					90%-12.0			
Barium	2009	ppm	2	2	0.026	N/A	Discharge of drilling wastes; Metal refineries or Erosion of natural deposits	NO
Cadmium	2009	ppm	0.005	0.005	0.0008	N/A	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries & paints. Erosion of natural deposits;	NO
Nickel	2009	ppm	0.10	0.10	0.033	N/A	Discharge from electroplating, stainless steel, and alloy products; Mining & refining operations	NO
Chlorine, Total	2009	ppm	4	4	1.0	0.2-1.7	Water additive used to control microbes. By-product of drinking water	NO
Chlorite	2009	ppm	1.0	0.8	0.99	0.21-0.99		NO
Microbiological Contaminants								
Turbidity	2009	NTU	0.3	TT	0.30	0.06-0.3	Soil runoff	NO
100% of the samples were Below the TT value of 0.3								
Total Coliform Bacteria	2009	0	1	0	0	NA	Naturally present in environment	NO
Total Organic Carbon (UV254)	2009	ppm	TT	N/A	1.67	1.27-2.36	Naturally present in the environment	NO
Radioactive Contaminant								
Total Beta	2004	pci/L	50	0	4.4	N/A	Decay of natural & man made deposits	NO
Volatile Organic Contaminants								
Bromodichloromethane	2009	ppb	NA	NA	8.0	NA	Byproduct of chlorination	NO
Clorodibromomethane	2009	ppb	NA	NA	1.9	NA	Byproduct of chlorination	NO
Chloroform	2009	ppb	NA	NA	19.0	NA	Byproduct of chlorination	NO
Trihalomethanes								
TTHMs(Total trihalomethanes)	2009	ppb	80 ARA	0	48.0	31.5-69.7	Byproduct of chlorination	NO
Haloacetic Acids								
Total Haloacetic acids	2009	ppb	60 ARA	NA	31.0	12.3-50.9	Byproduct of chlorination	NO
IDSE TTHM's (ppb)*	2009	ppb	NA	NA	NA	23.3-108	Byproduct of chlorination	NO
IDSE HAA5 (ppb)*	2009	ppb	NA	NA	NA	13.1-58.2	Byproduct of chlorination	NO



Lead and Copper Precautions

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. Brimfield Water System is responsible for providing high quality drinking water, but can not control the variety of materials used in home plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing for 30 seconds to 2 minutes before using water for drinking and 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 <http://www.epa.gov/safewater/lead>.

Disinfectants/Disinfection Byproducts Rule (D/DBPR)

Our public water system was required by USEPA to conduct an evaluation 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 byproduct concentrations. The locations selected for the IDSE may be used for compliance monitoring under stage 2 DBPR, beginning in 2012. Disinfection byproducts are the result of providing continuous disinfection of your drinking water and from when disinfectants combine with organic matter naturally occurring in source water. Disinfection byproducts are grouped into two (2) categories, Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). USEPA sets standards for controlling the levels of disinfectant byproducts in drinking water, including both TTHMs and HAA5s.

Customer Views Welcome

If you are interested in learning more about the water department and water quality or participating in the decision-making process there are a number of opportunities available. Questions about water quality can be answered by calling our Customer Service office at 330-297-3685. Inquiries about public participation and policy decisions can be made by calling the main office at 330-297-3670. The Board of Commissioners meetings are Tuesday and Thursday at 9:00 am and open to the public.

Additional Information and Relative Measurements

EPA considers 50 pCi/L to be the level of concern for Beta particles
Iron and manganese have only secondary maximum contaminant levels (SMCL):

SMCL for iron = 0.300 ppm

SMCL for manganese = 0.050 ppm

DEFINITIONS OF TERMS

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 MAXIMUM 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 MCLG AS FEASIBLE USING THE AVAILABLE TREATMENT TECHNOLOGY.

MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL): THE HIGHEST RESIDUAL DISINFECTANT LEVEL ALLOWED.

MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL (MRDLG): THE LEVEL OF RESIDUAL DISINFECTANT BELOW WHICH THERE IS NO KNOWN OR EXPECTED RISK TO HEALTH.



ACTION LEVEL (AL): THE CONCENTRATION OF A CONTAMINANT, WHICH IF EXCEEDED, TRIGGERS TREATMENT OR OTHER REQUIREMENTS WHICH A WATER SYSTEM MUST FOLLOW.

PARTS PER MILLION (ppm), OR MILLIGRAMS PER LITER (mg/L): ARE UNITS OF MEASURE FOR CONCENTRATION OF A CONTAMINANT. A PART PER MILLION CORRESPONDS TO ONE SECOND IN 11.5 DAYS.

PARTS PER BILLION (ppb) OR MICRO GRAMS PER LITER (ug/L): ARE UNITS OF MEASURE FOR A CONTAMINANT. A PART PER BILLION CORRESPONDS TO ONE SECOND IN 31.7 YEARS.

THE "<" SYMBOL WHICH MEANS LESS THAN. A RESULT OF <5 MEANS THAT THE LOWEST LEVEL COULD NOT BE DETECTED WAS 5 AND THE CONTAMINANT IN THAT SAMPLE WAS NOT DETECTED.

IDSE: INITIAL DISTRIBUTION SYSTEM EVALUATION

ARA: ANNUAL RUNNING AVERAGE

NA: NOT APPLICABLE

PICOCURRIES PER LITER (pCi/L) A MEASURE OF RADIATION

MILLIONS OF FIBERS PER LITER (MF/L): A MEASURE OF ASBESTOS

USEPA: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

EPA: ENVIRONMENTAL PROTECTION AGENCY

