

CITY OF RAVENNA – WATER TREATMENT PLANT
Ravenna, Ohio (www.ci.ravenna.oh.us)
2016 Annual Consumer Report on the Quality of Tap Water
This report is also available on the World Wide Web at: www.ci.ravenna.oh.us

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The City of Ravenna is committed to providing residents with a safe and reliable supply of high-quality drinking water. We have a current, unconditioned license to operate our water system. The drinking water is tested using sophisticated equipment and advanced procedures. City of Ravenna water meets all state and federal standards for both appearance and safety. This annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA) will tell you where your water comes from, what the tests show about it, and other things you should know about drinking water.

We are again proud to report that the water provided by the City of Ravenna – meets or exceeds established water-quality standards.

Call us at (330) 297-2168 for information about the next opportunity for public participation in decisions about our drinking water.

Overview

In 2016, your water department distributed 531 million gallons of water to Greater Ravenna customers and 63 million gallons to Portage County for a total of 694 million gallons. The City of Ravenna and City of Kent cooperatively maintain an emergency water line, which was regularly tested throughout 2016 to ensure that water can be provided from one community to the other community in the event of an emergency. Ensuring reliability has been an essential part of planning in recent years. Many positive changes are taking place behind the scenes to further improve water quality, replace infrastructure, reduce operating expenses and insure the security of our facilities. Please be assured that we are striving to make your water the best that it can be!

Water Source

City of Ravenna – The City of Ravenna public water system uses surface water drawn from Lake Hodgson. For the purposes of source water assessments in Ohio, all surface waters are considered to be susceptible to contamination. By their nature, surface waters are readily accessible and can be contaminated by various methods in a short period of time. The City of Ravenna's source water protection area contains a moderate number of potential contaminant sources, which include agricultural run-off, private septic systems, oil and gas wells, run-off from construction sites and road crossings. The City of Ravenna public water system treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. It is important to note that Lake Hodgson is very pristine. Unlike many lakes, there is no development permitted surrounding it. The most common problem associated with this and most any other lake water source is generally aesthetic by nature. It is a common occurrence for algae to grow in any lake during certain times of the year; it can cause an objectionable taste and odor to be imparted in the water. The City of Ravenna has invested in a treatment system that utilizes powdered activated carbon as a means to remove objectionable tastes and odors. Since powdered activated carbon is a very expensive chemical, its use is minimized to contain costs while maintaining a dosage sufficient to eliminate most objectionable taste or odors. More detailed information on our source water is provided in the City of Ravenna's Source Water Assessment Program report (SWAP), which can be discussed by calling the Water Treatment Plant Superintendent at (330) 296-2741.

An Explanation of the Water-Quality Data Table

This report is based upon tests conducted in the year 2016 by the City of Ravenna Water Treatment Plant. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing performed in the 2016 calendar year. The EPA requires us to monitor for certain contaminants less than once per year, because the concentrations of these contaminants do not change frequently. Terms used in the Water-Quality Table and in other parts of this report are defined here.

Maximum Contaminant Level or 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 or 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.

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 a little over 11.5 days.

Parts per Billion (ppb) or Micrograms per Liter (ug/L): Are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of 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.

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.

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

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

The "<" symbol : A symbol that means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

Picocuries per liter (pCi/L): A common measure of radioactivity.

Key to Table

AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal MFL = Million Fibers per Liter
 NTU = Nephelometric Turbidity Units mrem/year = millirems per year (a measure of radiation absorbed by the body)
 pCi/L = picocuries per Liter (a measure of radiation) ppm = parts per million, or milligrams per liter
 ppt = parts per trillion, or nanograms per liter ppb = parts per billion or micrograms per liter ARA = Annual Running Average
 ppq = parts per quadrillion, or picograms per liter TT = treatment technique 90% = 90th percentile NA = Not Applicable

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources In Drinking Water	Violation	
Inorganic Contaminants									
Nitrate	2016	ppm	10	10	0.13	0.10- 0..22	Runoff from fertilizer, Leaching from septic tanks, Sewage; Erosion of natural Deposits	NO	
Fluoride	2016	ppm	4	4	0.97	0..78-1.10	Erosion of natural deposits: Water additive.	NO	
Copper	2015	ppm	1.3 AL	1.3	0.12	.018-0.15	Corrosion of household plumbing systems.	NO	
No samples exceeded AL					90%-0.12		Erosion of natural Deposits		
Lead	2015	ppb	15 AL	0	3.30	0 – 4.20	Corrosion of household plumbing systems.	NO	
No samples exceeded AL					90%-3.90				
Chromium	2016	ppb	100	100	1.36	N/A	Discharge from steel and pulp mills, erosion of natural deposits	NO	
Nickel	2016	ppb	100	100	2.39	N/A	Erosion of natural deposits; Discharge from electroplating, stainless steel, and alloy products; Mining & refining operations		
Chlorine, Total	2016	ppm	4.0	4.0	1.31	0.8 – 1.90	Water additive used to control microbes.	NO	
Chlorite	2016	ppm	1.0	0.8	0.62	0.42-0.89	By-product of drinking water disinfection	NO	
Microbiological Contaminants									
Turbidity	2016	NTU	0.3	TT	0.07	0.05-0.18	Soil runoff	NO	
99% of the samples were Below the TT value of 0.3									
Total Coliform Bacteria	2016	0	1	0	0	N/A	Naturally present in environment	NO	
Total Organic Carbon (Suva)	2016	ppm	TT	N/A	1.62	1.44-1.83	Naturally present in the environment	NO	
Radioactive Contaminant									
Gross Alpha	2016	pCi/L	15	0	<4	N/A	Decay of natural & man made deposits	NO	
Radium 228	2016	pCi/L	5	0	<1	N/A			
Volatile Organic Contaminants									
Bromodichloromethane	2016	ppb	N/A	N/A	6.60	N/A	Byproduct of chlorination	NO	
Clorodibromomethane	2016	ppb	N/A	N/A	2.06	N/A	Byproduct of chlorination	NO	
Chloroform	2016	ppb	N/A	N/A	11.8	N/A	Byproduct of chlorination	NO	
Trihalomethanes									
TTHMs(Total trihalomethanes)	DS 201	2016	ppb	80 ARA	0	42.1	40.4-44.4	Byproduct of chlorination	NO
Haloacetic Acid Total Haloacetic acids	DS 201	2016	ppb	60 ARA	N/A	35.6	26.8-42.4	Byproduct of chlorination	NO
Trihalomethanes									
TTHMs(Total trihalomethanes)	DS 202	2016	ppb	80 ARA	0	46.0	36.1-64.1	Byproduct of chlorination	NO
Haloacetic Acid Total Haloacetic acids	DS 202	2016	ppb	60 ARA	N/A	38.8	30.5-46.8	Byproduct of chlorination	NO
Trihalomethanes									
TTHMs(Total trihalomethanes)	DS 203	2016	ppb	80 ARA	0	43.5	31.8-59.4	Byproduct of chlorination	NO
Haloacetic Acid Total Haloacetic acids	DS 203	2016	ppb	60 ARA	N/A	37.8	27.8-41.1	Byproduct of chlorination	NO

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources In Drinking Water	Violation	
Trihalomethanes TTHMs(Total trihalomethanes)	DS 204	2016	ppb	80 ARA	0	40.7	33.1-52.3	Byproduct of chlorination	NO
Haloacetic Acid Total Haloacetic acids	DS 204	2016	ppb	60 ARA	NA	36.6	25.5-48.9	Byproduct of chlorination	NO
Unregulated Contaminants*									
Name									
Chromium		2015	ppb	N/A	N/A	0.65	.31-.85		
Molybdenum		2015	ppb	N/A	N/A	1.5	1.2-1.8		
Strontium		2015	ppb	N/A	N/A	112	109-117		
Chromium, Hexavalent		2015	ppb	N/A	N/A	.46	.26-.65		
Chlorate		2015	ppb	N/A	N/A	470	412-457		

Action Level

Saxitoxin		2016	ppb	.30	.023	.023	Harmful Algae Blooms
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*Unregulated contaminants monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Water-Quality Table Footnotes

Turbidity is a measure of the cloudiness of the water and is an indication of the effectiveness of filtration. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1.0 NTU at any time. As reported above, the City of Ravenna's highest turbidity result for 2016 was 0.18NTU.

The value reported under "detected" for **Total Organic Carbon (TOC)** is the lowest ratio of TOC removal based on alternate Suva testing. A value of less than two (2.0) indicates that the water system is in compliance with TOC removal requirements. The actual TOC present in the raw water during 2016 was 5.2 mg/l with a range between 1.1 mg/l and 7.0 mg/l. The actual TOC present in the filtered water during 2016 was 2.5 mg/l with a range between 1.0 mg/l and 4.0 mg/l.

Lead – 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. The City of Ravenna is responsible for providing high quality drinking water, but 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 at <http://www.epa.gov/safewater/lead>. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using your tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791)

* Under the Stage 2 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 are used for compliance monitoring under Stage 2 DBPR, for the calendar year 2016. Disinfection byproducts 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 byproducts are grouped into two categories, Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). USEPA sets standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both TTHMs and HAA5s.

Explanation of Violations

Duration: NONE

Health Effects: NONE

Action Taken: NOT APPLICABLE

Required Additional Health Information

To ensure that water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water

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 (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, 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 radioactive material,

and can pick up substances resulting from the presence of animals or from 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 natural-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, storm water runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics, 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, 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. 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 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* are available from the Safe Drinking Water Hotline (800-426-4791).

National Primary Drinking Water Regulation Compliance

This report was prepared by Tim Stephens, Superintendent at the Ravenna Water Treatment Plant at (330) 296-2741 (tim.stephens@ci.ravenna.oh.us). For more information call Glenn Strouse Chemist/Chief Operator Ravenna Water Treatment Plant 330-296-2741 (glenn.strouse@ci.ravenna.oh.us) or Don Kainrad, Ravenna Service Director 330 297-6326 (don.kainrad@ci.ravenna.oh.us). **Visit the City of Ravenna on the Internet at <http://www.ci.ravenna.oh.us>**

TAMPERING LAW

The State of Ohio has a law (ORC 4933.19) which makes tampering with city meters or equipment illegal and establishes penalties for violations. Penalties are prescribed for the following illegal acts:

Interfering with or by-passing a water meter or attachment to impede or reduce correct registration of the meter.

Reconnecting water service that has been disconnected or shut-off by the city for non-payment or other reasons.

Anyone found guilty of these illegal acts may be subject to a maximum of five years in jail or a maximum fine of \$2,500 or both. In addition, persons convicted must pay for the value of the water stolen and for any damaged equipment.

Proof that a meter, pipe, valve or other attachment has been tampered with or reconnected is presumptive evidence that the customer or user has caused the tampering or reconnecting. It is no longer necessary to catch a person in the act of tampering or reconnecting.