

2017 Water Quality Report - City of Owosso Water System

This report covers the drinking water quality for the City of Owosso Water System for the 2016 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2016. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

Your water comes from 6 groundwater wells, each over 80 feet deep. The State performed an assessment of our source water to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very-low" to "very-high" based on geologic sensitivity, well construction, water chemistry and contamination sources. The susceptibility of our source is rated as susceptible.

There are no known or identified significant sources of contamination within the city water supply. Ground Water sources are monitored and protected by an approved Michigan Department of Environmental Quality (MDEQ) Wellhead Protection Program Plan (WHPP), which is designed to (1) ensure safe drinking water to the public, and (2) protect drinking water from potential sources of contamination by following the WHPP program guidelines set forth by the MDEQ.

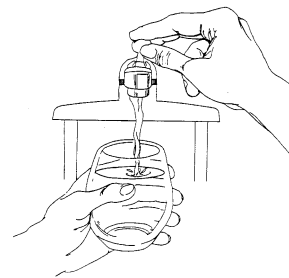
If you would like to know more about the report, please contact the Water Plant Superintendent David Haut at 301 W. Main Street, Owosso, MI 48867. Phone: 989-725-0560. Email: david.haut@ci.owosso.mi.us or at our web site at <http://www.ci.owosso.mi.us/Utilities>.

- **Contaminants and their presence in 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 **EPA's Safe Drinking Water Hotline (800-426-4791)**.

- **Vulnerability of sub-populations:** 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 systems 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. United States Environmental protection Agency and the center for Disease Control (USEPA/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 (800-426-4791).

- **Sources of drinking water:** The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from ground water 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 from human activity.
- Contaminants 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 and wildlife.
 - ✧ **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or 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 and residential uses.
 - ✧ **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
 - ✧ **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 stormwater runoff, and septic systems.



In order to ensure that tap water is safe to drink, the USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health.

Water Quality Data

The table below lists all the drinking water contaminants that the city detected during the 2016 calendar year. The presence of these 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 conducted during January 1 – December 31, 2016. The State of Michigan allows the monitoring of certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. The data delineated below is representative of the water quality testing performed during 2016, with some data being more than one year old as approved by the MDEQ.

Terms and abbreviations used below:

- **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 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 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 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.
- **N/A:** Not applicable. **ND:** Not detectable at testing limit. **ppb:** Defined as parts per billion or micrograms per liter. **ppm:** Defined as parts per million or milligrams per liter. **pCi/l:** Defined as picocuries per liter (a measure of radioactivity).
- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Regulated Contaminant	MCL	MCLG	Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Chromium (ppb)	100	100	0.62	0.48 to 0.62	2014	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	0.40	0.37 to 0.40	8/2016	No	Erosion of natural deposits. Discharge from fertilizer and aluminum factories.
TTHM - Total Trihalomethanes (ppb)	80	N/A	56.5	48.9 to 56.5	8/2016	No	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	5	2.0 to 5.0	8/2016	No	Byproduct of drinking water disinfection
Chlorine* (ppm)	MRDL	MRDLG	0.29	0.26 to 0.29	2016	No	Water additive used to control microbes
	4	4					
Radioactive Contaminant	MCL	MCLG	Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Alpha emitters (pCi/L)	15	0	1.5	N/A	2014	No	Erosion of natural deposits
Combined Radium pCi/L (T)	5	0	0.4	N/A	8/2016	No	Erosion of natural deposits
Contaminant Subject to AL	Action Level	MCLG	90% of Samples ≤ This Level	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant	
Lead (ppb) **	15	0	11	2014	2	Corrosion of household plumbing systems; Erosion of natural deposits	

Special Monitoring and Unregulated Contaminant ***	Average Level Detected	Range	Year Sampled	Comments
Sodium (ppm)	34	29 to 38	2016	Typical source is erosion of natural deposits
Chloride (ppm)	72	60 to 84	2016	Naturally occurring or indicative of road salt contamination.
Sulfate (ppm)	113	106 to 120	2016	Naturally occurring.

Special Monitoring and Unregulated Contaminant ***	Average Level Detected	Year Sampled	Comments
1,4-dioxane (ppb)	0.088	2014	This is used as a solvent and solvent stabilizer in various manufacturing processes.
chlorate (ppb)	196	2014	This is present with sodium hypochlorite used for disinfection.
chromium-6 (hexavalent chromium) (ppb)	0.42	2014	Naturally occurring element, used in making steel and other alloys.
strontium (ppb)	236.75	2014	Naturally occurring element.

* Chlorine was calculated using the running annual average.

** 90 percent of the samples collected were at or below the level reported for our water.

*** Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps the USEPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Information about 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 water service lines and home plumbing. The City of Owosso Water System is responsible for providing high quality drinking water, but cannot control the variety of materials used in household 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 <http://www.epa.gov/safewater/lead>. *Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.*

Monitoring and Reporting Requirements: The State of Michigan and the USEPA requires the testing of water on a regular basis to ensure its safety. The city of Owosso has met all mandated monitoring and reporting requirements for 2016.

Water Quality Reporting: The city updates this report annually, and will keep consumers informed of any water quality concerns that may occur throughout the year. Copies of the Water Quality Annual Report are available at City Hall.

Comment and Inquiries: The city invites public participation in decisions that affect drinking water quality. Public comment may be provided at City Hall during regularly scheduled city council meetings, held at 7:30 p.m. on the first and third Mondays of each month. In addition, the general public may also contact the Water Plant Superintendent, David Haut at 989-725-0560, or email: david.haut@ci.owosso.mi.us. Further, the city web site at <http://www.ci.owosso.mi.us/Utilities>, is available for inquiries and comment. Finally, the Director of Public Services and Utilities is available for information and inquiries at 989-725-0555 or email at glenn.chinavare@ci.owosso.mi.us.

For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.