



## WATER QUALITY REPORT FOR 2019 LAKE ARROWHEAD WATER SYSTEM



This report will provide you with information relative to your drinking water source and types of treatment it receives before it reaches your tap. The report will also list all of the contaminants detected in your water and an explanation of all violations in the past year.

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 and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity.

Your drinking water source originates from two wells. Well #1 is 8" diameter, approximately 84.9' deep and has a capacity of 150 gallons per minute. Well #2 is 12" diameter, approximately 73' deep and has the capacity of 220 gallons per minute.

The water is pumped into the well house where polyphosphate is added in an effort to reduce water corrosiveness to your plumbing fixtures and staining of fixtures and clothes.

Sodium hypochlorite is added for disinfection to kill harmful bacteria.

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 the water poses a health risk. More information about the contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general populations. Immune-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 the infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

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. Lake Arrowhead Estates Water System 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 1-800-426-4791 or at <http://www.epa.gov/safewater/lead.com>

The Lake Arrowhead water supply originates from groundwater. As water travels through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. These include:

**MICROBIAL** contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, livestock and wildlife.

**INORGANIC** contaminants, such as salts and metals which can be natural or may result from storm runoff, wastewater discharge, oil, and gas production.

**PESTICIDES** and **HERBICIDES** which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

**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

**RADIOACTIVE** contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to assure that tap water is safe; the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

Table "A" shows all the drinking water contaminants that we detected during the year of 2019. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality but some is more than one year old.

TABLE A

CONTAMINANTS	MCL	MCLG	Your WATER	RANGE OF DETECTIONS	SAMPLE DATE	VIOLATION	TYPICAL SOURCE OF CONTAMINANT
Fluoride	4 ppm	4 ppm	ND ppm	NA	06/21/2009	No	Erosion of natural deposits
Sodium	NA	NA	0.50 ppm	NA	06/21/2019	No	Erosion of natural deposits
Copper	1.3 ppm	1.3 ppm	0.32 ppm	0 out of 5 homes exceeded the action level	8/08/2018	NO	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	15 ppb	0 ppb	0 ppb	0 out of 5 homes exceeded the action level	8/08/2018	NO	Corrosion of household plumbing systems, Erosion of natural deposits
Total Trihalomethanes	80ppb	NA	31.0 ppb	NA	7/17/2018	NO	By product of drinking water chlorination.
Haloacetic Acid	60ppb	NA	.20.0 ppb	NA	7/09/2018	NO	By product of drinking water chlorination.
Chlorine	MRDL 4.0ppm	MRDLG 4.0ppm	RAA .44 ppm	Range .23 - .88 ppm	monthly	NO	Water additive used to control Microbes

\*Sodium is considered special monitoring - there is no established EPA drinking water standard for sodium . Sodium monitoring is required to inform the residents and the local health department of sodium levels in the community.

Terms and abbreviations used in Table “A”

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

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

**NA:** Not applicable

**ND:** Not detectable at testing limit

**PPB:** Parts per billion or micrograms per liter

**PPM:** Parts per million or milligrams per liter

**PCI/L:** Picocuries per liter (a measure of radiation).

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

**RAA:** The highest running annual average and the range of detection.

**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 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.

**Lead:** Infants and children who drink water containing lead in excess of the action level could experience delays in their physical and 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. Additional information is available from the Safe Drinking Water Hotline (800-426-4791)

The 1996 amendments to the Federal Safe Drinking Water Act( SDWA) requires each State to develop and implement a source water assessment program (SWAP) to assess the susceptibility of all public water supply sources to contamination. This program requires the Michigan Department of Environmental Quality to analyze source sensitivity (natural protection available), delineate source water areas, inventory contaminant sources, determine susceptibility, and assure the public is notified of this determination. The Source Water Assessment Score (SWAS) is a process that factors geologic and water well attributes, water chemistry, and potential contaminant sources for each drinking water source into a raking system to determine the relative potential for contamination. Sources with low scored are considered to be less susceptible to contamination than those with high scores. If you would like more information on Source Water Assessment, you can call the Lenawee County Drain Commission at 517-264-4696

Lake Arrowhead rating is listed below.

Well #1 rated----- Moderately Low

Well #2 rated----- Moderately Low

For more information about safe drinking water, visit the U.S. Environmental Protection Agency at [www.epa.gov/safewater.com](http://www.epa.gov/safewater.com)

We invite public participation in decisions that affect drinking water quality. Raisin Township holds meetings on 2<sup>nd</sup> Monday of each month at 7:30 P.M. (Except March is held on 1<sup>st</sup> Monday of the month.)

If you have additional questions concerning this report, please call Lenawee County Drain Commission at (517) 264-4696 or (517) 264-4699 and ask for Tom Gillenwater, Sewer & Water Systems Superintendent or write to (Lenawee County Drain Commission, 320 Springbrook Ave. Adrian, Mich. 49221).