

Village of Sand Lake

2021 Water Quality Report

This report covers the drinking water quality for the Village of Sand Lake for the 2021 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2021. 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 two groundwater wells. Well 1 is 318 feet deep and Well 3 is 320 feet deep. The well water is treated with NSF approved liquid chlorine for water system disinfection in order to maintain water quality. 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 State conducted a source water assessment in 2014 and the susceptibility rating is Low for both wells.

There are no significant sources of contamination in our water supply. We make every effort to protect our sources through daily, monthly, and annual testing and monitoring for any future contaminant sources.

If you would like to know more about this report, please contact Village President, Mollie Doerr, at the Village Municipal Complex located at 2 E Maple Street. She may also be contacted by phone at 616.636.8854 or by email at: president@villageofsandlake.org.

- 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 the 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. U.S. EPA/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 (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 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.

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- 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, EPA prescribes regulations that limit the number 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.

PFAS (Per- and Polyfluoroalkyl Substances):

PFAS, sometimes called PFC's, are a group of chemicals that are resistant to heat, water, and oil. PFAS have been classified by the U.S. Environmental Protection Agency (EPA) as an emerging contaminant on the national landscape. For decades, they have been used in many industrial applications and consumer products such as carpeting, waterproofing clothing, upholstery, food paper wrappings, fire-fighting foams, and metal plating. They are still used today. PFAS have been found at low levels both in the environment and in blood samples from the general U.S. population.

These chemicals are persistent, meaning they do not break down in the environment. They also bioaccumulate, meaning the amount builds up over time in the blood and organs. Although our understanding of these emerging contaminants is constantly changing, elevated levels of PFAS have the potential to cause increased cholesterol, changes in the body's hormones and immune system, decreased fertility, and increased risk of certain cancers. Links to these health effects in humans are supported by epidemiologic studies and by laboratory studies in animal models.

The U.S. EPA has not established enforceable drinking water standards, called maximum contaminant levels, for these chemicals. However, U. S. EPA has set a lifetime health advisory (LHA) level in drinking water for two PEAS: perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). The LHA is the level or amount, below which no harm is expected from these chemicals. The LHA level is 70 parts per trillion (ppt) for PFOA and 70 ppt for PFOS. If both PFOA and PFOS are present, the LHA is 70 ppt for the combine concentration.

The Village of Sand Lake had its wells tested by a private laboratory and the State of Michigan laboratory. The results from both the State and private tests indicated there are no PFOA's or PFOS's in the samples from our two wells. There are many other PFAS compounds that currently do not have LHA levels. For information on these, including possible health outcomes, you may visit these websites: <https://www.epa.gov/pfas> <https://www.atsdr.cdc.gov/pfas/> or <http://www.michigan.gov/pfasresponse>.

Why was the Village of Sand Lake's source water tested for PFAS? The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has coordinated a statewide initiative to test the drinking water from all schools that use well water and community water supplies for PFAS. EGLE is taking this precautionary step to determine if public health actions are needed.

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You may have questions such as is it safe to eat fish in areas where PFAS are detected?

Wild fish samples are being collected and analyzed to determine the levels of PFAS in fish. Recommendations will then be made on how much is safe to eat. Some information is already available on the State of Michigan Eat Safe Fish guides, which are available at <http://wmv.michigan.gov/eatsafefish>. Also, information currently suggests that swimming or bathing in water affected by PFAS is not a major contributor to overall exposure.

State and local agencies are actively working to obtain more information about this issue as quickly as

possible. Additional testing of the drinking water will be conducted to demonstrate that the PFAS levels are consistent, and reliably below the existing LHA.

If you are concerned about exposure to PFAS in drinking water, you may contact the MDHHS Toxicology Hotline at 800-648-6942 or the CDC/ATSDR at <https://www.cdc.gov/cdc-info/>. You may call the CDC at 800-232-4636. You may also contact the Village of Sand Lake Water Dept. The state has created a website where you can find information about PFAS contamination and the efforts to address it.



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Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2021 calendar year and prior. 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 done January 1 — December 31, 2021. 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 the data is representative of the water quality, but some are more than one year old.

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

Regulated Contaminant	MCL	MCLG	Highest Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Barium (ppm)	2	2	0.06		2021	No	Discharge of drilling wastes; discharge of metal refineries; erosion of natural deposits.
Fluoride (ppm)	4	4	0.232	N/A	2019	No	Erosion of natural deposits. Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Regulated Contaminant	MCL	MCI-G	Highest Level Detected	Range	Year Sampled	Violation Yes/ No	Typical Source of Contaminant
HAA5 Haloacetic Acids b	60		32.5	N/A	2020	No	Byproduct of drinking water disinfection
TTHM Total Trihalomethane(b)	80		49.1	N/A	2020	No	Byproduct of drinking water disinfection

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	MRDL	MRDLG	Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Chlorine (ppm)	4	4	0.08	0.06 - 0.41	2021	No	Water additive used to control microbes
Radioactive Contaminant	MCL	MCLG	Highest Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Gross Alpha (pCi/L)	15		1.6		2016	No	Erosion of natural deposits
Combined Radium 226 Radium 228	5		0.61		2016	No	Erosion of natural deposits
Contaminant Subject to AL	Action Level	MCI-G	90% of Samples** < This Level		Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)"	15		0.0		2020	None	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppb)	1300		100		2020	None	Corrosion of household plumbing systems; Erosion of natural deposits
Special Monitoring and Unregulated Contaminant			Average Level Detected	Range	Year Sampled	Comments	
Sodium (ppm)			6.00		2020	Erosion of natural deposits	

* The chlorine "Level Detected" was calculated using a running annual average.

** 90 percent of the water customer tap samples collected were at or below the level reported for our water. Monitored and tested from customer tap.

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

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Microbial Contaminants	MCL	MCI-G	Number Detected	Violation Yes / No	Typical Source of Contaminant
Total Coliform Bacteria	>1 positive monthly sample (>5.0% of monthly samples positive)		0	No	Naturally present in the environment
Fecal Coliform			0	No	Human and animal fecal waste
E. coli in the distribution system	See E. coli note ²		0	No	Human and animal fecal waste

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 service lines and home plumbing. The Village of Sand Lake is responsible for providing high quality drinking water (please note the results above) 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 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Additional Information:

The Village of Sand Lake's well water supply has a total hardness of 206 ppm and it also has high iron levels (0.36 mg/L), both of which may cause staining of clothing and fixtures as well as contributing to cloudiness, bad taste and odor.

These are not considered a health hazard.

We are proud to report!

The Village of Sand Lake has initiated an annual well pump efficiency maintenance program what will help to maintain the integrity and reliability of the well pump and well. Recognizing that the best way to maintain high quality drinking water is to prevent contaminants from reaching drinking water sources, the Village of Sand Lake started a wellhead protection program in 2020.

Monitoring and Reporting Requirements and Violations:

The State and EPA require us to test our water on a regular basis to ensure its safety. Public community water suppliers are required to conduct monthly bacteriological testing and annual testing of various regulated contaminants. Please see the table above for specific results.

Monitoring Requirements Not Met for WSSN: 5907

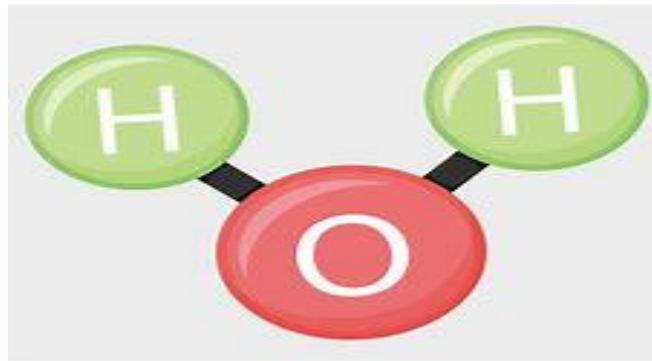
The Village had one monitoring violation in 2021. We were out of compliance from July 1 – July 11, 2021 due to water users not being notified individually that the 2020 Water Quality Report was available to them. This was corrected on July 12, 2021 and posed no health risk in the water supply.

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We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at the Village of Sand Lake Municipal Complex at 2 E Maple Street. This report will not be sent to you.

We invite public participation in decisions that affect drinking water quality. The Village has regularly scheduled Council meetings on the third Monday of each month. The public is welcome to attend. For more information about your water, or the contents of this report, contact Bill Cornelisse, Director/OIC, at dpw@villageofsandlake.org. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.



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