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FOR IMMEDIATE RELEASE

Village of Vicksburg Issues Do-Not-Drink Advisory for Infants Under 12 Months Old USE BOTTLED WATER FOR INFANTS UNDER 12 MONTHS

The Village of Vicksburg is working in conjunction with the Michigan Department of Health and Human Services, the Kalamazoo County Health & Community Services Department, and the Michigan Department of Environment, Great Lakes, and Energy to investigate potential elevated manganese levels in our municipal water system. There is currently no state or federal requirement to test for manganese in a municipal water system. **This is only a precautionary advisory at this time.**

The Village of Vicksburg is doing additional testing to determine if it meets all health advisory limits for manganese. One of the Village's operational wells tested slightly above the recommended levels of manganese. The current manganese levels that have been independently tested show that the levels of manganese in a sample of homes/businesses connected to Vicksburg Municipal Water System are between 10-320 parts per billion (ppb). The Environmental Protection Agency (EPA) short-term (1-10 day) Health Advisory for infants less than 12 months old is 300 ppb and adults and children older than 12 months is 1,000 ppb.

As the manganese levels in the drinking water approach/exceed the EPA short-term health advisory for Infants, this Precautionary Notice is being distributed for Village of Vicksburg residents serviced by our water system until additional testing can be completed. We anticipate that this testing will be completed and the results received by 5 p.m. September 1st.

The Village of Vicksburg and our partner agencies are taking a precautionary approach to address this issue. The Village of Vicksburg will be providing bottled water for families with infants 12 months and under until further notice. If you are on the Village water system, have a child under the age of 12 months, and require bottled water call 269-649-1919 and delivery will be arranged. These lines are open Monday – Friday between 8 am – 5 pm.



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What is being done?

We are taking additional water samples throughout the municipal water system to gather the appropriate data to be able to conclude the level of manganese throughout the system. We are exploring and discussing all options if further steps are required. We are and will continue working with the Michigan Department of Health and Human Services, Kalamazoo County Health & Community Services Department, and the Michigan Department of Environment, Great Lakes, and Energy to investigate the amount of manganese in our municipal water.

A Virtual Town Hall Meeting is being held Tuesday September 1st at 6 p.m. and will include experts from the Kalamazoo County Health Department and the State of Michigan. A link to the meeting will be posted on our website at www.vicksburgmi.org prior to the meeting.

What should I do?

Use bottled water only for children less than 12 months old (infants).

Some amount of manganese is needed for the human body to function, but too much can be harmful. The bodies of adults and children older than 12 months can remove excess manganese. Infants' bodies may not be able to process higher levels. Making formula or foods with water containing high levels of manganese can increase an infant's risk of health problems. Too much manganese is linked to learning and behavior problems.

Do not boil the water. Boiling water does not remove manganese and may increase the amount.

If you have medical questions, please contact your doctor.

What does this mean?

- Infants less than 12 months old should be given bottled water for anything they eat or drink, including making juice, formula, purees and cereals.
- Adults and children over 12 months old can use tap water for drinking.
- Adults and children of any age (including infants) can continue to bathe and shower, brush their teeth, and wash clothes, foods, and dishes in tap water.



Village of
Vicksburg
The Village with a Vision

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For questions about manganese and your health, please contact Kalamazoo County Health & Community Services Department at (269) 373-5210 or Michigan Department of Health and Human Services at 800-648-6942. These lines are available Monday through Friday from 8 am - 4 pm.

For questions about the Vicksburg Municipal Water System and/or receiving bottled water for infants 12 months old or younger please call 269-649-1919. These lines are available Monday through Friday from 8 am - 5 pm.

Please share this information with all the other people who drink Village of Vicksburg water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses).

This notice is being sent to you by the Village of Vicksburg.

Frequently Asked Questions about Manganese in Drinking Water

What is manganese and where does it come from?

Manganese is a common, naturally-occurring element found in rocks, soil, water, air, and the food we eat. Manganese is an essential nutrient. *Manganese* is not to be confused with *Magnesium*, which is a different element with different properties.

How are people exposed to manganese?

Most manganese exposure in the general population comes from food. Grains, beans, nuts, seeds, leafy vegetables, and teas are rich in manganese. Manganese is also found in breastmilk and infant formula. Although the primary source of exposure to manganese is food, drinking water can increase the overall dietary intake of manganese.

Is manganese regulated in drinking water?

No. There is no national primary drinking water regulation (NPDWR) for manganese.

The Safe Drinking Water Act (SDWA) requires the EPA to evaluate unregulated drinking water contaminants. EPA included manganese on the fourth Contaminant Candidate List after considering new health effects information. The Agency is now gathering occurrence data for manganese in public drinking water systems as part of the fourth Unregulated Contaminant Monitoring Rule (UCMR 4). The next step of the SDWA process will be for the Agency to consider this occurrence information and available health effects information to evaluate whether EPA should develop a NPDWR for manganese.

The EPA does have a “secondary standard” for manganese. See below for more details.

Why does MDHHS extend the Health Advisory (HA) to bottle fed infants younger than twelve months (beyond the EPA HA of infants younger than 6 months)?

As a precaution, MDHHS extended the EPA HA to infants younger than 12 months old to account for premature births and different rates of infant development.

Why does the EPA have a “secondary standard” for manganese in drinking water?

Manganese is among 15 contaminants for which the EPA has established National Secondary Drinking Water Regulations (“secondary standards”) that set non-mandatory water quality standards. They are intended as guidelines to assist public water systems in managing their drinking water for aesthetic considerations. The EPA’s secondary standard concentration for manganese is 0.05 mg/L (or 50 µg/L [ppb]) and addresses

EPA’s Drinking Water Health Advisories

EPA’s 10-day Health Advisory manganese value for bottle-fed infants younger than six months is 0.3 mg/L (or 300 µg/L or parts per billion [ppb]).

EPA’s One-day and 10-day value for adults and children older than 6 months is 1 mg/L (or 1000 µg/L or ppb).

EPA’s Lifetime Health Advisory value is 0.3 mg/L, or 300 µg/L or ppb.

potential staining of plumbing fixtures and laundry, taste, and color effects that may occur above that concentration, or level.

Does manganese cause “hard” water?

No. Water hardness is a measure of how much magnesium and calcium is dissolved in water. Hard water does not readily rinse away soap and can leave deposits on glasses and plumbing. Water softeners are often used to reduce hardness by removing dissolved calcium and magnesium.

Why are some drinking water systems testing for manganese?

The EPA’s Unregulated Contaminant Monitoring Rule (UCMR 4) requires all large drinking water systems and a subset of small systems to collect samples and report analytical results for manganese and 29 other chemicals. The purpose of this monitoring is to determine if establishing an enforceable national primary drinking water regulation for these unregulated contaminants is warranted. Independent of UCMR, some water systems conduct voluntary monitoring for manganese and other unregulated contaminants.

What are EPA’s Health Advisories for Manganese?

Health advisories (HAs) are concentrations in drinking water at or below which health effects are not anticipated to occur over a specific duration (i.e., a day, ten days, or lifetime). For manganese, drinking water concentrations above the lifetime HA are not necessarily harmful to a majority of the population. An individual’s nutritional requirements for manganese and potential for harmful health effects may be highly variable. In fact, some adults consume more than 10 mg/day of manganese in their diet without experiencing any harmful health effects. However, bottle-fed infants who drink water containing more than 0.3 mg/L (300 µg/L or ppb) of manganese over a period of 10 days may be at greater risk of having negative neurological effects. People who have decreased ability to excrete manganese, such as those with liver disease, and the elderly are more prone to the negative effects of elevated manganese exposure than the general population.

How can I find out if there are elevated levels of manganese in my public drinking water supply?

Customers that are served by a public water system can contact their local water supplier and ask for information on manganese in their drinking water. Customers are encouraged to request a copy of their Annual Water Quality Report (also known as a Consumer Confidence Report). This report lists the levels of contaminants that have been detected in the water during the prior calendar year and identifies whether the system meets state and EPA drinking water standards. However, because manganese is not currently a regulated contaminant, not all water systems have sample results.

The most recent Consumer Confidence Report can be obtained from your drinking water utility, by visiting their website or contacting them for a copy. Some public water systems upload their Consumer Confidence Report to EPA’s website at: [epa.gov/ccr](https://www.epa.gov/ccr).

Also, if your public water system is collecting occurrence data for UCMR 4 and has submitted results to the EPA, those results may be found in the [National Contaminant Occurrence Database \(NCOD\)](#).

I live in a community with elevated manganese levels. Who do I call to get more information about what my water system/supplier is doing to address the elevated levels?

Contact your local water supplier to find out more about manganese in your drinking water. If you do not know who your local water supplier is, the information should be included in your latest water bill.

I get my tap water from a private well. How can I find out if manganese is in my water?

If you are concerned about the possibility of manganese in your drinking water and you are served by a private well, EGLE and MDHHS recommend having your drinking water tested for manganese. Laboratory analysis is necessary to determine if your water contains manganese. Qualified testing labs can analyze a sample of your water to determine whether manganese is present and at what concentrations.

EGLE and MDHHS recommend you have independent testing done at a qualified testing lab. More information about laboratory testing can be found here:

www.michigan.gov/EGLElab

How does a utility reduce or remove manganese from water?

Manganese levels in drinking water may be controlled through source water management prior to water treatment and distribution. For example, a groundwater system may pump water from alternate wells or a surface water system may use a multi-level intake to utilize source water with lower background manganese concentrations.

If source water management does not result in a desired reduction in manganese concentration, multiple treatment options are available. Prior to selecting a treatment option, monitoring should be conducted to characterize the concentration and form of manganese (e.g., dissolved, particulate, colloidal) in the source water, so that the most viable treatment option is determined. Chemical oxidation followed by precipitate removal, sorption and catalytic oxidation, ion exchange, and lime softening have been shown to be effective at reducing manganese levels in finished water.

How does a homeowner remove manganese from water?

Water softeners and reverse osmosis have been shown to be effective at lowering manganese levels in tap water, depending on the form of manganese in your water (dissolved or particulate) and concentration. Boiling water will not remove manganese but will instead concentrate it.

It's important to verify that the filter, purifier or treatment system is certified to the applicable standard for the reduction of the contaminants of most concern. For more

information on home filtration treatment system certification, you can go to the following link: <https://www.nsf.org/knowledge-library/home-water-treatment-system-selection-or-you-can-contact-the-MDHHS-Drinking-Water-Investigation-Unit-at-844-934-1315-for-more-information>. Filters found in refrigerators, water pitchers, or filters installed on your water tap are not effective at removing manganese and one should check with the filter manufacturer for specific detail. Also, keep in mind that any type of treatment device requires regular maintenance, such as changing filters, cleaning scale build-up, maintaining adequate salt levels in brine tanks, or disinfecting the unit. Failure to properly maintain a unit reduces its effectiveness and, in some cases, may make the water quality worse. Continued maintenance is necessary for the life of the device along with regular water testing to ensure the device is working properly. Ensuring your system is working properly may minimize the need for testing.

Follow the manufacturer's recommendations for filter replacements and maintenance.

Should I use this water to make formula for my baby?

For drinking water concentrations of manganese above 0.3 mg/L (300 µg/L or ppb), do not use your tap water to prepare bottles or food for infants under 12 months.

If I have concerns about my child's health or my own, who should I contact?

If you have health concerns, you should speak to your health care provider.

Can I cook with the water?

For drinking water concentrations of manganese above 0.3 mg/L (300 µg/L or ppb), infants, the elderly, and those with liver disease should avoid eating foods made with tap water such as soup. The tap water may be used to prepare foods, such as pasta, where the water is discarded prior to consumption.

Can I boil the water to remove manganese?

For drinking water concentrations of manganese above 0.3 mg/L (300 µg/L or ppb), no, do not boil water that you intend to drink. Boiling will concentrate the levels of manganese.

Can I use the water to make ice and drinks?

For drinking water concentrations of manganese above 0.3 mg/L (300 µg/L or ppb), infants should avoid consuming the water and including water used for formula. Do not use your tap water to prepare bottles or food for infants under 12 months.

Can I use the water to wash dishes and do laundry?

Yes, there are no health concerns associated with these activities. However, at concentrations above 0.05 mg/L (50 µg/L or ppb), manganese can stain plumbing fixtures and laundry.

Can I bathe, shower, or wash my hands with the water?

Yes. Manganese does not easily absorb through the skin.

Can I brush my teeth with the water?

Yes, water with elevated manganese can be used to brush your teeth.

Can I give the water to my pets and livestock?

Information is not available on the effect of elevated manganese in drinking water on pets and livestock. Please contact your veterinarian.

If the manganese in my drinking water is currently elevated, should I expect it to return to “normal” levels quickly?

Generally speaking, the concentration of manganese and other naturally-occurring elements does not change significantly over short periods. This is particularly true if your water system relies on groundwater as its source. Centralized (at the public water system) or in-home treatment may be necessary to reduce high concentrations of manganese.

For more information:

- Center for Disease Control Agency for Toxic Substances and Disease Registry Manganese ToxFAQs <https://www.atsdr.cdc.gov/toxfaqs/tfacts151.pdf>
- EPA’s Office of Ground water and Drinking Water: <https://www.epa.gov/ground-water-and-drinking-water>
- EPA’s Drinking Water Health Advisory for Manganese: https://www.epa.gov/sites/production/files/2014-09/documents/support_cc1_magnese_dwreport_0.pdf
- EPA’s Secondary Drinking Water Standards: <https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisance-chemicals>
- EPA’s Drinking Water Criteria Document for Manganese: <https://www.epa.gov/wqc/drinking-water-criteria-document-manganese>