



# High Manganese Levels Detected in Wabasha County Private Wells

Wabasha SWCD

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Tests completed at the Southeast Water Analysis Laboratory in Rochester over the course of 2021 and 2022 have revealed that many private wells in select regions of Wabasha County contain elevated levels of the element manganese, some of which exceed the recommended limits for safe human consumption.

Manganese is an essential element that your body requires for multiple functions and is found naturally in rock, soil, water, and many of the foods we eat. Some people do, however, develop manganese toxicity following chronic consumption of water containing high levels of manganese. According to the Minnesota Department of Health (MDH), this may result in several symptoms from troubles with memory, attention, and motor skills. Research continues to better understand how excess manganese intake may impact our health.

MDH lists the safe drinking water rates for adults at 300 micrograms of manganese (a microgram is one one-millionth of a gram, or one one-thousandth of a milligram) per liter. For infants, this rate is limited to 100 micrograms of manganese per liter of drinking water.

The Minnesota Groundwater Association states that while parts of Western Minnesota may commonly see rates of manganese in groundwater of 1,000 micrograms per liter, Southeast Minnesota rarely sees base levels in excess of 50 micrograms per liter, which is why the number of results coming back from the Southeast Water Analysis Lab testing significantly higher than the safe limits set by MDH is not only unusual. These results may also be a concern to well owners and those who may rely on those wells for regular water consumption.



On Teepeota Point, just south of Wabasha, multiple private wells participated in voluntary testing. Within a fairly small geographic area, wells have recorded manganese levels ranging from the normal expected range for this region all the way to 9,000 micrograms per liter – a huge difference and one that adds to the difficulty of gauging how concerned well owners ought to be about manganese.

It is not clear exactly why some wells are reporting such high concentrations of the element in their drinking water and not others in the vicinity. Manganese is known to sometimes be found in association with elevated levels of iron in the rock and groundwater, too. Like most things taking place below the surface of the earth, it is difficult to know exactly what is going on.

Manganese can potentially be treated in drinking water to reduce its concentration. MDH provides a guide on their website titled Home Water Treatment (URL below) which details several possible contaminants in drinking water, including manganese, and the various treatment options, with expected efficacy, and rough ranges of potential costs for those systems.

If you own a well in the vicinity of Teepeota point or have concerns about your well water, it may be a good idea to have your well tested. It is a good practice to have your well tested annually or semi-annually to help ensure what you are drinking is safe, because conditions can and do change over time. The Wabasha Soil & Water Conservation District (SWCD) has a limited quantity of do-it-yourself well testing kits available at no cost to interested landowners. Please contact our office to learn more. We can also help direct landowners to resources upon request.

**Minnesota Department of Health Fact Sheet on Manganese:**

<https://www.health.state.mn.us/communities/environment/water/docs/contaminants/mangnsefctsht.pdf>

**Minnesota Department of Health Guide to Home Water Treatment:**

<https://www.health.state.mn.us/communities/environment/water/docs/factsheet/hometreatment.pdf>

**Wabasha Soil & Water Conservation District:**

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