

May 21, 2021

Foley City Council
c/o Ms. Sarah Brunn
P.O. Box 709
Foley, MN 56329-0709

Subject: Health Risk Advisory for Manganese in Foley Drinking Water Supply (PWSID# 1050001)

Dear Council Members:

This letter is to notify you that the Minnesota Department of Health (MDH) is issuing a Health Risk Advisory for manganese at Well Nos. 3, 4, and 5 Entry Points.

MDH recommends that the city of Foley notify its consumers as soon as possible about manganese in their drinking water supply. It is important that people consuming the water be informed about any potential health risks and actions they can take to reduce exposure to manganese within their own home, as well as any actions the water system is taking. We encourage the water system to lead this messaging.

In addition, MDH recommends that the city of Foley take action to reduce exposure to manganese to below the Health-Based Value (HBV) of 100 µg/L in the drinking water supply. Examples of actions to reduce exposure may include reducing the use of wells with manganese above the HBV, adding treatment to remove manganese, or optimizing existing manganese treatment.

Sample Results

MDH has collected samples for manganese and the results are shown in the table below. The average level of manganese at each sample location exceeds the HBV of 100 µg/L. In addition, the average level of manganese at Well #3 Entry Point exceeds the EPA lifetime Health Advisory Level of 300 µg/L. Therefore, MDH is issuing this Health Risk Advisory.

Foley Sample Results

| Sample Location | Mn (µg/L) 1/12/21 | Mn (µg/L) 2/24/21 | Average Mn (µg/L) |
|---------------------|----------------------|----------------------|----------------------|
| Well #3 Entry Point | 660 | 750 | 705 |
| Well #4 Entry Point | 132 | 151 | 141.5 |
| Well #5 Entry Point | 149 | 164 | 156.5 |

µg/L = micrograms per liter

Bold means that the concentration exceeds a MDH Health-Based Value or Health Risk Limit

Bold with Italics means that the concentration also exceeds the EPA lifetime Health Advisory Level

HBV and Health Effects for Manganese

MDH has set a HBV for manganese of 100 µg/L for formula-fed infants and infants that drink tap water. For children over one year old and adults, MDH supports the EPA lifetime Health Advisory Level of 300 µg/L, which is the maximum concentration of manganese that is not expected to cause any adverse health effects for a lifetime of exposure. Results for manganese in samples collected from your water system were higher than each of these guidance values. Therefore, it is recommended that you communicate to residents about the health risks to people of all ages.

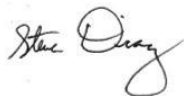
Health-based guidance values are set at levels which pose little or no health risk to people, including the most sensitive populations like a fetus, infants, children, elderly, and people with impaired immunity. Although the potential for harm increases as the level of a contaminant increases above the health-based guidance value, health scientists may not be able to precisely estimate the change in risk. These guidance values apply to short periods of time as well as over a lifetime of exposure.

Manganese occurs naturally in rocks and soil across Minnesota and is commonly found in Minnesota ground and surface water. People need some manganese to stay healthy, but too much can be harmful to the nervous system. Infants may develop learning and behavior problems if they drink water or formula made with water that has too much manganese in it. Children and adults who drink water with high levels of manganese for a long time may have problems with memory, attention, and motor skills.

For More Information

MDH intends to meet with you to discuss future actions related to manganese and will be contacting you soon to discuss such a meeting. In the interim, if you have any questions about health concerns or would like more information about manganese, contact the MDH Health Risk Assessment Unit at 651-201-4899 or health.risk@state.mn.us. For technical assistance related to drinking water, please contact Jennifer Soltys, District Engineer, at 320-223-7340 or jennifer.soltys@state.mn.us. More information about manganese is also available on our website at [Manganese in Drinking Water](https://www.health.state.mn.us/communities/environment/water/contaminants/manganese.html) (<https://www.health.state.mn.us/communities/environment/water/contaminants/manganese.html>)

Sincerely,



Steven Diaz
Assistant Division Director
Environmental Health Division
Minnesota Department of Health
PO Box 64975
St. Paul, MN 55164-0975
www.health.state.mn.us

cc: Jennifer Soltys, District Engineer, MDH St. Cloud District Office
Chad Kolstad, MDH DWRP Program Coordinator
Sarah Fossen-Johnson, Supervisor, MDH Health Risk Assessment Unit
Kris Klos, Research Scientist, MDH Health Risk Assessment Unit
Water Superintendent, City of Foley

To obtain this information in a different format, call 651-201-4700. Printed on recycled paper.