

Northwestern Wisconsin Groundwater Monitoring Project

Lake Superior Research Institute; University of Wisconsin-Superior

Wisconsin DNR Certification #816003540

801 North 28th Street; Barstow Hall; Superior, WI 54880

Thank you very much for your participation in the project "Identification of naturally-occurring fluoride and selected metals in northwestern Wisconsin groundwater". This sample kit is being provided to you at no cost; the cost of sample analysis and reporting is paid through grant funding. For volunteers within Douglas County, we ask that you bring the sample(s) back to the Lake Superior Research Institute at the University of Wisconsin-Superior. For volunteers outside of Douglas County, your kit will contain a postage-paid shipping label to allow you to mail your kit back. Your role as a sample collection volunteer is critical to the success of this project. The data that you are helping to collect will provide much-needed baseline information about compounds in northwestern Wisconsin groundwater. These data will become publically available, but will be identified by sample ID code and geospatial indicator only. No names or other private information will be associated with the results; no private information will be disclosed to anyone. Your results will be sent directly to you via the contact information provided on the sample collection form (see Page 5).

We hope that you will benefit from finding out the fluoride concentration in your primary drinking water source, and we encourage you to talk with your dental provider, primary health care provider, and/or your county public health department about the results. Some sample kits contain a second sample bottle, which will be used to analyze for the metals arsenic, manganese, iron, lead, and aluminum. Again, we encourage you to speak with your county's public health department and/or your primary health care provider if you have any questions or concerns about these results.

Sample collection consistency is very important to the accuracy of the data generated through this project. Please follow these sample collection instructions exactly, and fill out Sections 1 and 2 (highlighted) of the sample collection form completely. For any questions regarding the sample collection process, please contact me (the project's Principal Investigator) at (715)394-8422 and/or kprihoda@uwsuper.edu.

Sincerely,



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Directions for Collecting Sample Bottle #1 (Fluoride)

1. Keep the sample bottle closed until it is ready to be filled.
2. The sampling faucet that is chosen must be easy to flush (i.e., near a drain or high enough to put a bucket underneath it) and have a separate cold water tap. There are three possible sampling sample location options, listed in order of preference:
 - a. Sampling faucet located between the well and the pressure tank (Fig. 1). If this option is not available, please move on to Option b.

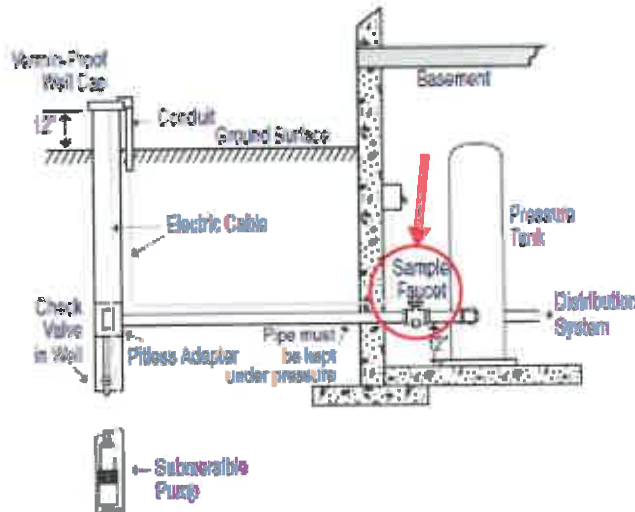


Figure 1. Diagram of a private well with a sample faucet located between the well and the pressure tank. Diagram courtesy of Wisconsin Department of Natural Resources (2017).

- b. Sampling faucet located after the pressure tank but before any filters or other water treatment system(s), see Fig. 2. This option may not be available in homes with a crawl space, if this option is not available move on to Option c.



Figure 2. Photograph of a sample faucet located after the pressure tank (circled in red/red arrow) but prior to a carbon filter (circled in yellow).

- c. Sampling faucet located after the pressure tank and filter(s)/water treatment system(s), see Fig. 3. This option uses an indoor sink, either a kitchen, bathroom, or laundry room sink for sample collection.
 - i. If collecting from an indoor sink, please use a sink with a metal faucet rather than a plastic faucet (Fig. 3). Remove the aerator, gasket, or screen (if present, Fig. 3).



Figure 3. This is an example of a metal, indoor faucet located after the pressure tank and water treatment system (with aerator being removed).

3. Turn on the cold water at the sampling location selected in Step 2 and allow it to run at high flow for at least five minutes to clear the lines.
4. Reduce the water flow to permit filling the sample bottle(s) without splashing.
5. Uncap the bottle, collect the sample of water. Fill to about the neck of the bottle (Fig. 4).



Figure 4. Photo of sample collection process. Arrow indicates neck of the bottle where the bottle should be filled to.

6. Proceed to “Directions for Collecting Sample Bottle #2” below if your kit contains two bottles. If your kit contains one bottle, stop the flow of water and proceed to filling out Sections 1 and 2 (highlighted) of the Sample Collection Form (see reverse).

Directions for Collecting Sample Bottle #2 (Metals) – Not Present in all Kits

1. With the water still flowing from the collection of Sample Bottle #1, uncap the second bottle, collect the sample of water by filling to about the neck of the bottle. If the water was stopped between collecting Sample Bottles #1 and #2, please repeat Steps 3 – 6 in the previous section.
2. Stop the flow of water and proceed to filling out Sections 1 and 2 (highlighted) of the Sample Collection Form (see reverse).

Directions for Returning the Sample Kits

1. **IMPORTANT!** Samples must be received by the Lake Superior Research Institute within 14 days of collection. Please return the sample kit as soon as possible after collection.
2. To conserve grant funds, we ask that Douglas County volunteers bring their sample kits back to the Lake Superior Research Institute or Douglas County Health and Human Services Department anytime Monday through Friday from 8:00 am to 4:00 pm or contact Kelsey Prihoda to arrange a pick up time. For volunteers outside of Douglas County, a postage-paid shipping label is included in the sample kit.
3. Ensure the sample bottle(s) cap(s) are screwed on tightly and seal each bottle in the plastic bag(s) supplied in the kit.
4. Place each plastic bag containing the sample bottle(s) into the cardboard box along with the Sample Collection Form, close the box, and affix the shipping label (for volunteers outside of Douglas County).
5. Sample kits may be returned to the Lake Superior Research Institute or Douglas County Health and Human Services Department (for Douglas County volunteers), the location where the kit was picked up, or placed into the nearest US Postal Service collection box.

Sample Collection Form: NW WI Groundwater Monitoring Project

SECTION 1: TO BE COMPLETED BY THE SAMPLE COLLECTOR

Collection Date (MM-DD-YYYY):		Collection Time:		Circle: AM PM
Sample Collection Location:		<input type="checkbox"/> Faucet Between Well and Pressure Tank <input type="checkbox"/> Faucet After Pressure Tank but Before Filter(s)/Water Treatment System (if applicable) <input type="checkbox"/> Faucet After Pressure Tank and After Filter(s)/Water Treatment System (if applicable) <input type="checkbox"/> Other (Please Specify):		
Water Treatment System(s):		<input type="checkbox"/> None – Not Applicable <input type="checkbox"/> Iron Filter	<input type="checkbox"/> Water Softener <input type="checkbox"/> Other (Please Specify):	<input type="checkbox"/> Carbon Filter <input type="checkbox"/> Reverse Osmosis
Was sample collected before or after water treatment system(s)?		<input type="checkbox"/> Before <input type="checkbox"/> After <input type="checkbox"/> Not Applicable		
Well Owner's Contact Information		Private Well Information (Leave Blank if not Known)		
Name:		Well Address (Street or Legal Description):		
Telephone Number:		Town or City/County:		
Address:		Well Completion Date:		
		Wis. Unique Well Number:		
		Well Construction Type:	<input type="checkbox"/> Drilled <input type="checkbox"/> Jetted <input type="checkbox"/> Driven Point <input type="checkbox"/> Dug <input type="checkbox"/> Other (Please Specify):	

SECTION 2: SEND RESULTS TO (COMPLETED BY THE SAMPLE COLLECTOR)

Preferred Method to Communicate Results:	<input type="checkbox"/> Mail Hard Copy <input type="checkbox"/> E-mail Electronic Copy <input type="checkbox"/> Both <input type="checkbox"/> Other (Please Specify):
Send Results To (Name and Street/E-mail Address):	

SECTION 3: TO BE COMPLETED BY THE LABORATORY

Requested Analysis:	<input type="checkbox"/> Fluoride (Bottle #1; US EPA Method 300.0, v.2.1) <input type="checkbox"/> Metals (Bottle #2 – Arsenic, Iron, Manganese, Lead, and Aluminum; US EPA Method 200.9, v.2.2)
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Sample Receipt and Preservation Data

Date Received (MM-DD-YYYY):	Time Received (HH:MM):	Received by:
Was Sample Accepted for Analysis?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
If No, Why?	<input type="checkbox"/> Received Past Hold Time <input type="checkbox"/> Shipping Problem <input type="checkbox"/> Frozen during Transit <input type="checkbox"/> Other (Specify):	
Description of Water Appearance (Color, Strong Odor, Particulates):		

Laboratory Result(s)

Analyte	Result	Public Health Enforcement Standard (Wis. Ch. NR 140)	Public Health Preventative Action Limit (Wis. Ch. NR 140)
Arsenic (µg/L):		10 µg/L	1 µg/L
Aluminum (µg/L):		200 µg/L	40 µg/L
Fluoride (mg/L):		4 mg/L	0.8 mg/L
Iron (mg/L):		0.3 mg/L	0.15 mg/L
Lead (µg/L):		15 µg/L	1.5 µg/L
Manganese (mg/L):		300 µg/L	60 µg/L
Date Reported to Volunteer/Reported By:			

Data Reviewed by (Laboratory Manager or Quality Assurance Manager) Signature: