For Residents - Private Residential Well PFAS Sampling

Guidance

Introduction

Most laboratories will provide their own sample collection instructions. This guidance document may be used in conjunction with any sample collection instructions provided by the laboratory. This document does not supersede the laboratory's sampling instructions.

This sampling guidance is for homeowners who want to sample their own residential well for per- and polyfluoroalkyl substances (PFAS). This guidance discusses the process and acceptable materials that should be used when sampling for PFAS.

The purpose of this PFAS Sampling Guidance is to direct a resident in how to collect a sample for screening purposes. This sample is not suitable for investigatory use.

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) intends to update the information contained within this PFAS Sampling Guidance document as new information becomes available. The user of this PFAS Sampling Guidance is encouraged to visit the Michigan PFAS Response webpage (Michigan.gov/PFASResponse) to access the current version of this document. To view the EGLE Water Sampling 101, Collecting Samples for PFAS Analysis video click here.

This Residential Well PFAS Sampling Guidance discusses the potential for cross contamination that can occur from:

- Clothing
- Sample collection and handling
- Sample shipment

Contents

1. Prohibited and Allowable Items and Materials

For the purposes of this document, sampling materials and other items that have the potential for PFAS cross contamination have been divided into two major categories:

- **Prohibited Materials** (●) are items or materials that should not be used when sampling. It is well documented that they contain PFAS or that PFAS are used in their manufacture.

- **Allowable Materials** (■) are items or materials that may be used and have been proven not to be sources of PFAS cross contamination and are considered acceptable for sampling.

1.1 Clothing

Determine whether the clothing you intend to wear during sampling has been advertised as waterproof, water-repellant, or dirt and/or stain resistant. These types of clothes are most likely to have had PFAS used in their creation.

- ● If the laboratory did not provide gloves, do not use latex or vinyl gloves
- ● Do not wear anything made of Gore-Tex™, other water-resistant synthetics, or coated Tyvek® clothing. Additionally, avoid clothing that contains Teflon®.
- ● Do not wear clothing that has recently been dry-cleaned.
- ■ Wear well laundered clothing **not** recently washed with fabric softeners.
- ■ Use only powderless nitrile gloves or gloves provided by the laboratory.

1.2 Personal Hygiene and Personal Care Products

PFAS are known to be used in some personal hygiene and personal care products (PCP) such as, but not limited to, cosmetics, shampoo and other hair products, dental floss, sunscreens, insect repellents. However, if the current Sampling Guidance is followed, these items should not come into contact with the sample bottles or the actual water sample being collected.

- ● Do not handle or apply any PCPs such as lotion, perfume, deodorant/anti-perspirant, sunscreen, insect repellant, etc. that have not been determined to be PFAS-free for several hours before sampling.

1.3 Food Packaging

PFAS have been used by the paper and packaging industry as a special protective coating against grease, oil, and water for paper and cardboard in food packaging. Therefore, it is important to minimize interaction with these products before and especially during sampling.

- ● Do not touch, eat, or otherwise interact with pre-wrapped food or snacks, carry-out food, fast food, or other food items right before or during sampling.
- ■ Wash hands thoroughly after contact with any of these products and before sampling.

1.4 Items Required for Sampling

The laboratory you choose will provide the appropriate sampling materials. It is important to use only these items for sample collection.

2. Step-by-Step Sample Collection

Follow this step-by-step guide when taking your well sample. Note that Steps 1 – 2 will be done days to weeks in advance of Steps 3 – 8.

● - Prohibited ■ - Allowable

Steps 1 – 3: Find a Laboratory and Gather Sampling Materials

Step 1: Locate a laboratory that analyzes PFAS in drinking water. The Michigan PFAS Response webpage (Michigan.gov/PFASResponse) has information to assist you in finding an appropriate laboratory.

Step 2: Contact the laboratory to get details about working with them such as costs for materials, shipping, and analysis. The laboratory should provide you with:

- The appropriate PFAS-free sample bottle(s) for you to collect your sample(s).
- A PFAS test request form (sometimes referred to as a Chain of Custody form).
- Sample collection instructions.
- Ice packs that have been verified to be PFAS-free or PFAS-free storage bags for ice.
- If no blue ice packs are provided by the lab, use polyethylene plastic bags (such as Ziploc®) filled with ice.
- A cooler or shipping container for return shipment.
- Powder free nitrile gloves for you to use while collecting your sample.
- An estimation of how long it will take to get your results.

Plan Ahead:

Freeze ice packs for at least 24 hours prior to collecting samples.

Steps 3 – 4: On the Day of Sampling – Prepare for Sampling

Step 3: EGLE recommends using the kitchen faucet for collecting the sample.

- ● Do not use utility sprayers or leaky faucet heads that are spraying water.
- ■ Use only cold water for flushing and sample collection.

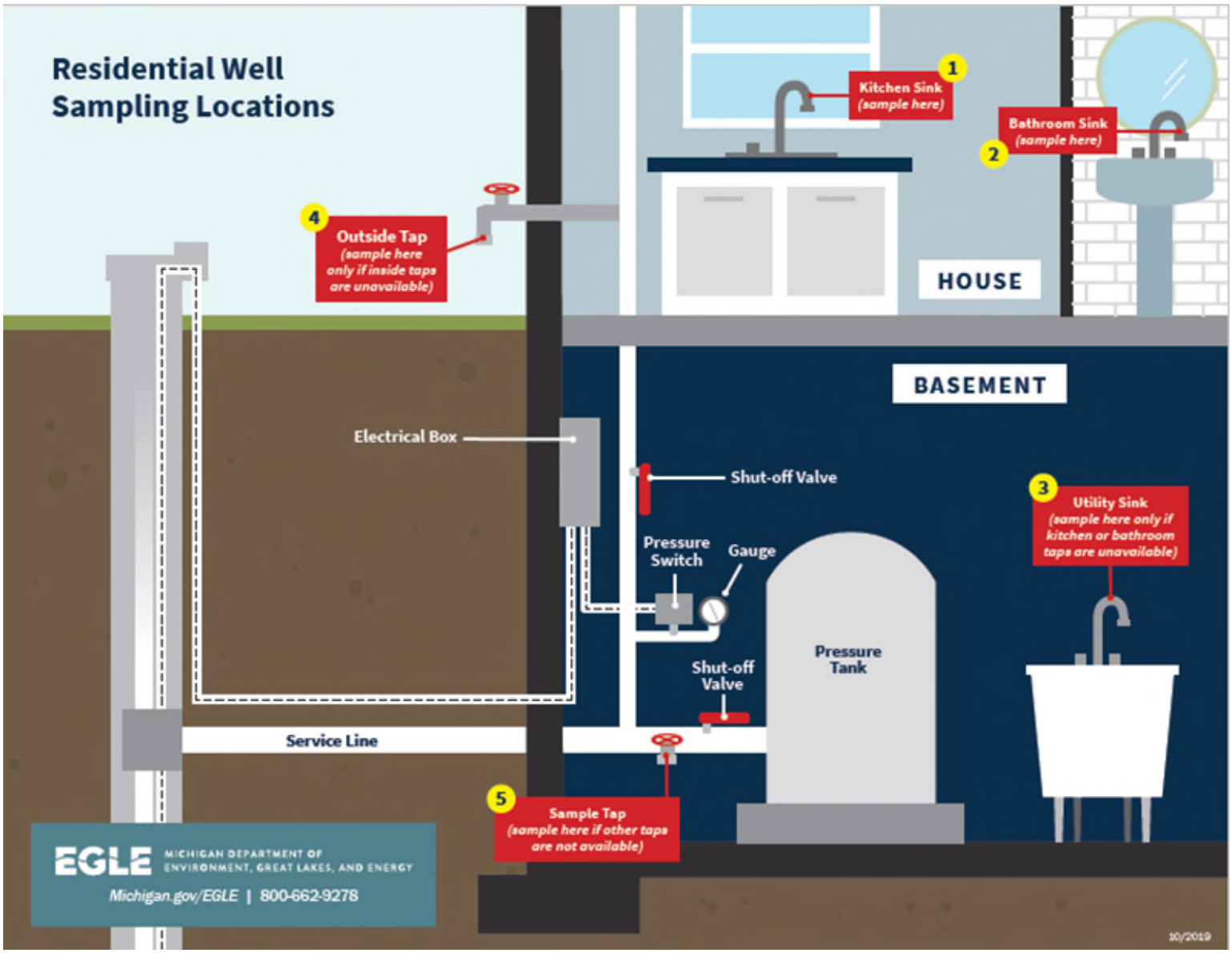
Sample location options in order of the most favorable to least favorable are:

1. Kitchen faucet
2. Bathroom faucet
3. Utility sink faucet
4. An outside, untreated tap
5. Sample tap

The following diagram may be helpful in locating the appropriate tap to take your sample. Your well set-up may appear different from the illustration.

● - Prohibited ■ - Allowable

Residential Well Sampling Locations Diagram



Step 4: Choose a spot away from the sample location where you can label your sampling materials. Note that the sample bottle(s) from the laboratory may come pre-labeled. Fill out all pertinent documentation and labels, ensuring that you fill in the collection date and time prior to opening the sample bottle. Remove any jewelry that might tear the gloves prior to putting them on. Thoroughly wash your hands with soap and water. Allow them to air dry or use a plain cotton cloth or untreated, non-recycled paper towel.

- Use ballpoint pens, or Fine or Ultra-Fine Point Sharpie® markers only.

● - Prohibited ■ - Allowable

Steps 5 – 7: Collecting Your Sample

Step 5: Perform a three-minute flush of your drinking water. *Make sure to use the cold-water tap.*

If using a tap that does not have a drain –such as example 5 in the diagram above, have a bucket ready to catch the water.

NOTE: If using an outside tap, a garden hose may be temporarily used to divert water during the flush. This hose must be removed prior to sampling. Ensure the spigot threads are clean and clear of tape or debris. It may be necessary to rinse the threads with water prior to sampling.

Step 6: After flushing the water for three minutes, decrease the water flow to the thickness of a pencil.

Put on your pair of nitrile gloves. Open your laboratory-provided sample bottle, taking care not to set the cap down or let anything touch the inside of the cap or bottle. There should be a preservative in the bottle in a powder form – DO NOT FLUSH OR REMOVE ANY PRESERVATIVE FROM THE BOTTLE(S).

Fill the sample bottle to the point indicated in the laboratory's sampling instructions. Do not allow the bottle to overflow. Do not dump any water out of the bottle. Replace the cap. Gently flip the bottle upside down a couple times to mix in the preservative.

If the laboratory provided an additional bottle(s) to collect a duplicate sample(s), repeat **Step 6**.

Step 7: The laboratory may have provided you with a control sample. A control sample typically consists of two bottles – one bottle filled with PFAS-free laboratory water and one empty bottle. Control samples help the laboratory determine if a sample has been contaminated during the sampling process. If you received a control sample, transfer the contents of the pre-filled bottle to the empty bottle, seal, and place with the sample bottle(s) filled in **Step 6.** Read the laboratory's sampling instructions for further information.

Step 8: After Sampling - Shipping Your Sample

Step 8: Place the sample bottle(s) into the cooler provided by the laboratory, taking care to surround the sample(s) with the provided ice packs or the provided bags that you have filled with ice.

Refer to the instructions provided in the sampling kit. Samples must be chilled during shipment and must not get warmer than 50°F during the first 48 hours after collection.

- ● Do not use chemical or blue ice that did not come from the lab.
- ■ Use ice packs provided by the laboratory only.
- ■ If the lab didn't provide ice packs, use regular ice that has been double bagged in bags provided by the laboratory or polyethylene plastic bags (such as Ziploc®).
- ■ Freeze ice packs for at least 24 hours prior to use.
- ■ Ship samples for next day delivery.

The PFAS test request form (sometimes referred to as a Chain of Custody form) provided by the laboratory should be placed outside of the cooler, but inside of the shipping container if possible. If the form must go inside the cooler itself, place it in a polyethylene plastic bag (such as Ziploc®).

● - Prohibited ■ - Allowable

Close and secure the cooler and ship to the laboratory using an overnight courier. Alternatively, some laboratories allow sample drop-off. Please refer to the laboratory's sampling instructions.

Evaluating Your Test Results

After receiving your test results, you may contact your local health department if you have questions. You may also contact the Michigan Department of Health and Human Services at 1-800-648-6942.

● - Prohibited ■ - Allowable

EGLE PFAS Sampling Quick Reference Guide[1] – For Homeowners

Personal Care Products[2] (PCP) – On the day of sample collection

● Prohibited	■ Allowable
• Any personal care products, sunscreens, insect repellents applied or handled in the sampling area.	• Personal care products, sunscreens, and insect repellents applied away from the sampling area, and away from sampling materials, followed by thoroughly washing hands and putting on a fresh pair of powderless nitrile gloves. • Sunscreens and insect repellents listed in the EGLE **General PFAS Sampling Guidance**

Clothing and Protective Clothing

● Prohibited	■ Allowable
• Anything made with Gore-Tex™ or other water-resistant synthetics • Anything applied with or recently washed with: o Fabric softeners o Fabric protectors, including UV protection o Insect resistant chemicals o Water, dirt, and/or stain resistant chemicals • Latex gloves	• Well-washed clothing, with most recent washings not using fabric softeners, made of or with: o Cotton o Polyurethane o Polyvinyl chloride (PVC) o Rubber o Neoprene • Powderless nitrile gloves

Sampling Items and Materials

● Prohibited	■ Allowable
• Sample bottles that have NOT been provided by the laboratory • Chemical or blue ice packs not provided by the laboratory • Recycled or chemically treated paper towels	• Laboratory-provided PFAS-free bottles • Regular ice, double bagged • Laboratory-provided ice packs • Low-density polyethylene (LDPE) (e.g., Ziploc®) bags • Untreated paper towels or cotton cloths

Food and Beverages

● Prohibited	■ Allowable
• No food should be eaten in the staging or sampling areas, including pre-packaged food or snacks. ■ If eating food on-site becomes necessary, move to the staging area and remove personal protective equipment (PPE). After eating, wash hands thoroughly and put on new PPE.	• Brought and consumed only outside the sampling area: o Bottled water o Hydration drinks (i.e., Gatorade®, Powerade®)

[1] This table is not considered to be a complete listing of prohibited or allowable materials.

[2] The avoidance of PCPs is considered to be precautionary because none have been documented as having cross-contaminated samples due to their use. However, if used, application of PCPs must be done away from sample bottles and hands must be thoroughly washed after the use of any PCPs before sampling.