

Water Sampling 101

This document provides recommendations for agricultural water sampling under the Food Safety Modernization Act (FSMA) Produce Safety Rule (PSR). Farms that are covered under the PSR will be required to test agricultural water for the presence of generic *E. coli* bacteria. The chart below provides an overview of the agricultural water compliance dates based on farm size. Compliance dates for agricultural water requirements have been extended while FDA considers how best to protect public health while addressing concerns about the complexity of the requirements and the practicality of implementing them across a wide variety of farms, water sources and uses.

Farm Size (Based on average annual produce sales)	Agricultural Water Compliance Dates
Large (> \$500K)	January 26, 2022
Small (\$250K – \$500K)	January 26, 2023
Very Small (\$25K – \$250K)	January 26, 2024

Why should produce farms test water sources?

Generic *E. coli* bacteria is an indicator species of potential fecal matter in your water. Low levels of *E. coli* are common for surface water sources used for irrigation. Ground water sources used for washing produce and sanitation should have no detectable *E. coli* bacteria.

BEFORE TAKING YOUR WATER SAMPLE

IDENTIFY AND MAINTAIN YOUR SAMPLE SITE

- Identify your sources of water used for irrigation and post-harvest washing/cleaning (e.g. river, pond, lake, well, drilled-well)
- Maintain your water sampling site for easy access (e.g. clear high grass, dense brush and obstacles)

SAFETY PRECAUTIONS & PREPARATION

- Wear appropriate clothing and footwear
- Let someone know where you will be sampling
- When sampling from a surface water source (such as a river) avoid leaning in too far by bringing a sampling pole and dipper
- Consider bringing the following equipment:
 - Pen and something to write on
 - Gloves
 - Sanitizer wipes or sterile alcohol swabs
 - Cooler and ice or ice packs
 - Extra sample bottles
 - Sample pole/dipper (water receptacle)
 - First aid kit



Surface Water



Ground Water



Sample Bottles



Cooler & Ice



Dipper



Sanitizer



TAKING YOUR WATER SAMPLE

View the Vermont Produce Program *Water Sampling 101* video at <https://tinyurl.com/watersampling101>

- 1** Identify your agricultural water sources and the types of test you will need.
Tip: Take water samples during the growing season when water is in use.
- 2** Contact a lab that offers the test you need.
Visit agriculture.vermont.gov/produceprogram/produce-safety-resources to find a water testing lab.
- 3** Before taking the sample, label the sterilized container with the information requested from the lab.
- 4** To avoid contamination, wear disposable gloves and avoid touching the inside of the bottle or lid.
Tip: You may also want to sanitize your water receptacle.

GROUND WATER

- 5** Remove screens, filters, or hoses that could harbor bacteria and sanitize the inside and outer rim of sampling point (using sanitizer wipes or ethanol).
- 6** Allow the water to run 2-5 minutes, or per lab instructions, before taking the sample.

SURFACE WATER

- 5** Insert and submerge the open bottle below the water surface.
Tip: If using a dipper, scoop the water and fill the sample bottle.
- 6** Do not disturb the sediment when sampling from a surface water source.

TIP: DO NOT OVERFILL THE SAMPLE BOTTLE

- 7** Secure the cap tightly and place the sample in a cooler with ice or ice packs.
Tip: Keep your sample below 50°F, but not frozen, during transport.
- 8** Fill out any corresponding lab sampling documents.
- 9** VAAFM recommends a 6-hour hold time (the time between sampling and processing) for the most accurate results.
- 10** Sample results are typically reported within 48 to 72 hours.
Tip: Contact the Vermont Produce Program for assistance with interpreting sample results.

If you are a Vermont produce farm and need assistance in determining whether your farm is subject to the FSMA Produce Safety Rule, contact the Vermont Produce Program at AGR.FSMA@vermont.gov or (802) 828-2433.

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