



CASCADE ANALYTICAL, INC.

# FSMA Produce Rule Requirements

Proudly serving Central Washington's Tree Fruit Industry since 1978

Wenatchee

(800) 545-4206

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## Irrigation Water Requirements for the FSMA Produce Rule (CFR 112 Subpart E)

The final version of the FDA's Produce Safety Rule was published in the fall of 2015. Most farms will have 2 years to come into compliance with the majority of the rule and an additional 2 years to come into compliance with the agricultural water provisions of the rule. This means that farms should be in compliance with the agricultural water portion of the rule in the fall of 2019.

The rule defines agricultural water as water which is likely to or intended to contact the harvestable portion of the crop. Testing is required for each water source that you use which will contact the harvestable portion of the crop. If your irrigation water does not contact the harvestable portion of the crop then no testing would be required for that water source. Tests need to be performed prior to and as near to harvest activities as is practical.

Farms need to complete an initial survey of their water source which needs to be completed by the compliance date mentioned above. These initial surveys are used to calculate the Geometric Mean (GM) and Statistical Threshold Value (STV) for that water source. The annual samples would then be used to update the GM and STV by replacing the oldest samples in the data set with the new samples. The required number of samples for the initial surveys and the required number of annual samples is based on the type of water source used.

<u>Type of Water Source</u>	<u># of Samples for Initial Survey</u>	<u>Annual Testing Frequency</u>
• Untreated surface water	20 samples over 2-4 years	5 samples/year
• Ground water (well water)	4 samples over 1 year	1 sample/year
• Water from Municipal source	None	No samples required

The microbial water quality criteria which must be met depends on the use of the water.

<u>Agricultural Water Use</u>	<u>Maximum E. coli Levels Allowed</u>
• Water used during or post-harvest Cooling/washing or for handwashing	0 detectable E. coli in 100mL
• Water Directly applied to Growing produce (Irrigation Water)	Geometric mean of <126 CFU/100 mL of E. coli and STV of <410 CFU/100 mL of E. coli

The GM is essentially the average value of the E. coli in the samples, but is a particular way of calculating an average that reduces the impact which abnormally high or low sample results would have on a traditional average. The STV is a way to show the variability of the water source. It is essentially the value at which 90% of samples would fall below that value. The FDA has said there will be online tools available for people to input their sample results and calculate their GM and STV. Currently UC Davis has an excel tool available for download and the University of Arizona has a web app and online calculator available. All three of these can be found by going to [ucfoodsafety.ucdavis.edu](http://ucfoodsafety.ucdavis.edu) or [wcf.s.ucdavis.edu](http://wcf.s.ucdavis.edu).

If the water does not meet these criteria, corrective actions are required as soon as is practicable, but no later than the following year. Farms with agricultural water that does not initially meet the microbial criteria have options by which they can meet the criteria and then be able to use the water on their crops. The two main options include allowing time for potentially dangerous microbes to die off on the field by using a 0.5 log/day reduction between last irrigation and harvest (no more than 4 days) or treating the water.

This is only an overview, please refer to CFR 112 for more detail on the requirements.

Revised 4/1/16



# GAP Water Sampling & Global GAP

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**\*\*\*PLEASE NOTE: Irrigation water samples for GAP compliance are only accepted MONDAY – THURSDAY. WE DO NOT ACCEPT SAMPLES ON FRIDAY! Thanks for your attention to this.\*\*\***

## Sampling Instructions for Irrigation Water and Potable Water

1. Gather and organize all sampling supplies: sampling containers, order form, waterproof pen or marker, clean cooler and frozen ice pack.
2. If sampling potable water, sterilize the faucet with a bleach solution (flame or alcohol may work also) prior to sampling.
3. If sampling irrigation water from a pipe, valve, spigot, etc. run the water for 3-5 min to flush standing water from the system.
4. Do not open the sample collection container until immediately prior to sampling. When ready to sample, remove the seal from the container and carefully remove the cap, do not to allow finger-tips to contact the rim or inside of the sampling container or cap at any time.
5. Fill the container slowly to minimize splashing, reducing the water pressure when sampling from a valve or pipe will help.
6. Fill the container to the designated 100 ml mark. A little more is ok, but the water must NOT be below the 100ml mark or the sample will not be accepted.
7. Carefully re-cap the container and label the sample container with date, time, sample ID and client name. Place on ice or in cooler until delivered to laboratory.
8. Make sure order form is filled out completely with sample ID, date, time, and test to be performed. Make sure all billing address information and signature areas are filled out as well.
9. Deliver the sample to the lab as soon as possible. Samples must be received within 22 hours of sampling.

## GLOBAL GAP Program (Version 5)

<u>Site/Parameter</u>	<u>Frequency</u>	<u>Lab Test Recommended</u>	<u>Approx. Cost</u>
1) AF 4.5.3 & FV 5.2.1 (access to potable water)	annually	Total Coliforms/E. Coli (#10043 Colilert Test)	\$26
2) CB 5.3 & FV 4.1.2 (irrigation/fertigation water risk assessment, analysis performed by suitable laboratory)	Based on Risk Assessment	Generic E. Coli (#10038 MPN Quanti-tray NP)	\$35
3) FV 5.3.1 (ice/water used at harvest is potable)	annually	Total Coliforms/E. Coli (#10043 Colilert Test)	\$26

**Note:** Since 1 & 3 would likely be the same water source, only (1) test would be needed.

**GAP Metals Scan:** Heavy metals scan that looks for Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.

\$175

Revised 8/18/15