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The Food Safety Modernization Act and Water Usage

Agriculture Law
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FSMA and Water Usage



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- FSMA’s water usage requirements apply to “agricultural water” – i.e., water that is used in the growing, harvesting, packing, or holding of produce “covered” by the Produce Safety Rule.
 - Example : irrigation water that is directly applied to the harvestable portion of a crop
- Aim is to minimize contaminated produce

FSMA and Water Usage



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Standards include:

- General water quality requirements;
- Water system inspection requirements;
- Water treatment requirements;
- Water testing requirements and
- Recordkeeping requirements



Water quality standards for agricultural water



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Type: Water in which it is reasonably likely that potentially dangerous microbes, if present, would be transferred to produce through direct or indirect contact.

Standard: **No detectible *E. coli* present per 100 ml of water.**

- Water used for washing hands during and after harvest;
- Water used on food-contact surfaces;
- Water used to directly contact produce (including to make ice) during or after harvest, and
- Water used for sprout irrigation.

Water quality standards for agricultural water



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Type: Untreated surface water applied to growing produce.

Standard: **The criteria are based on two values, the geometric mean (GM) and the statistical threshold (STV).**

The GM of samples is 126 or less CFU of generic E.coli per 100 mL of water and the STV of samples is 410 CFU or less of generic E.coli in 100 mL of water.

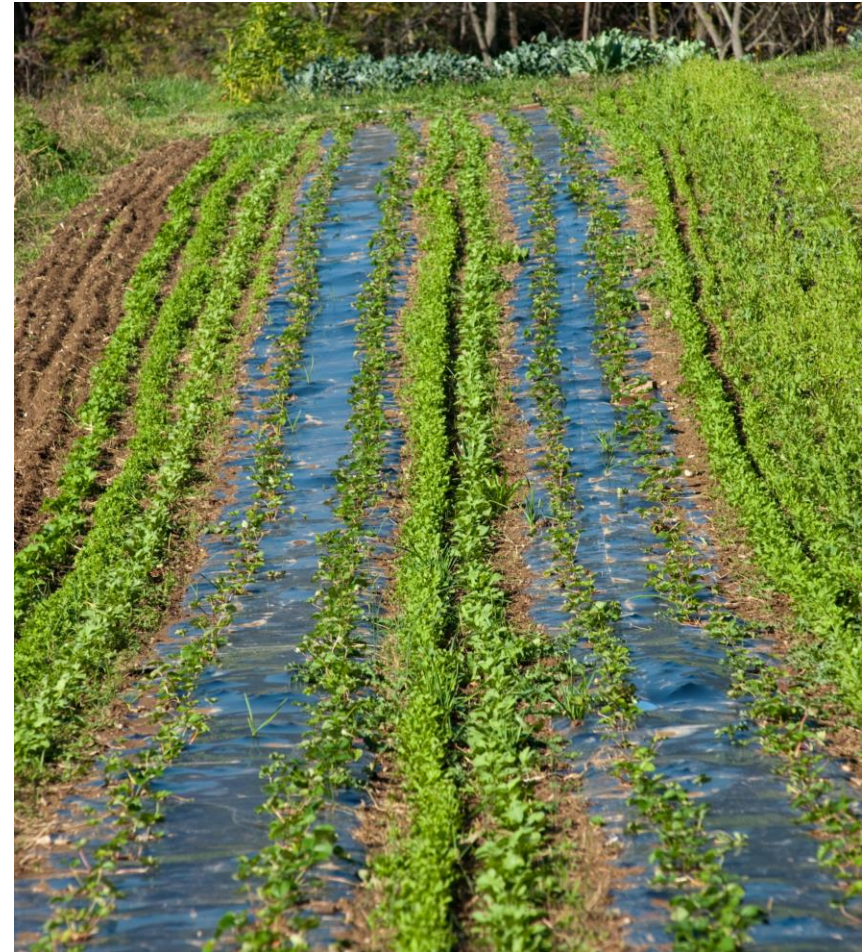
- If testing shows that you exceed these values, options include,:
 - Allowing time for potentially dangerous microbes to die off on the field by using a certain time interval between last irrigation and harvest, but no more than four consecutive days.
 - Allowing time for potentially dangerous microbes to die off between harvest and end of storage, or to be removed during commercial activities such as washing, within appropriate limits.
 - Treating the water.

Water testing standards for untreated surface water



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- **Conduct a baseline survey to initially develop the water quality profile of each of your water sources:** At least 20 samples over at least two years (2- 4 years).
- **Verify your water quality profile through annual sampling:** Each year, you must take at least 5 new samples to verify the accuracy of your water quality profile.



Water testing standards for untreated ground water



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- **Conduct a baseline survey to develop a water quality profile:** At least four tests during the growing season or over the period of one year, using at least four samples collected as close as practical to harvest.
- **Annual Verification:** If you meet the applicable standard in your baseline survey, then you only need to test once annually. Must resume testing at least four times per year (or growing season) if any annual test fails to meet the standard.



Water testing compliance dates



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- Very small farms (no more than \$250,000 in produce sales):
 - FSMA compliance: January 2020
 - Date to establish microbial water quality profile: January 2022
- Small farms (no more than \$500,000 in produce sales):
 - FSMA compliance: January 2019
 - Date to establish microbial water quality profile: January 2021
- All other farms (over \$500,000 in produce sales):
 - FSMA compliance: January 2018
 - Date to establish microbial water quality profile: January 2020

Water Sampling



- The FDA has clarified that farms (using surface water) do not have to have all 20 samples collected by the extended compliance date.
- Farms must take at least two and not more than four years to collect the necessary samples.
- Example- A large farm can start collecting 5 samples a year starting in 2018 for a total of 20 samples at the end of 2021; calculating the MWQP for the first time upon completing the 20-sample data set (at the end of 2021); and then apply any corrective actions as soon as practicable and no later than the following year (2022).