

# **Harvest & Post-Harvest Agricultural Water Requirements**

A FSMA Produce Safety Rule Update for Covered Farms

April 3<sup>rd</sup>, 2023

# Overview

- What Changed
- Compliance Dates
- Requirements
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# What Changed

- FDA originally postponed Subpart E (Agricultural Water) when the FSMA Produce Safety Rule was first introduced.
- Recently FDA announced that sections of Subpart E would go into effect beginning in 2023.
- The sections going into effect are related to Harvest and Post-Harvest (H/PH) Ag Water.
- Pre-Harvest Ag Water requirements remain postponed.

# Compliance Dates

## Harvest & Post Harvest (H/PH) Ag Water

Farm Size (annual produce sales)	Date
Large (>\$500k)	1/26/2023
Small (\$250k to \$500k)	1/26/2024
Very Small (\$25k to \$250k)	1/26/2025

# Definitions

## **Agricultural Water (Ag Water)**

Water used in covered activities on covered produce that is intended to, or is likely to, contact covered produce or food contact surfaces. Includes water used for hand washing.

### **Pre-Harvest Ag Water**

Water used during growing activities (including irrigation using direct water application methods and water used for preparing crop sprays).

### **Harvest & Post-Harvest Ag Water (H/PH)**

Water used in harvesting, packing, and holding activities (including water used for washing or cooling harvested produce, making ice and water used for preventing dehydration).

# Examples

## Pre-Harvest Ag Water

Irrigation (direct app. method)

Crop sprays (direct app. method)

Frost protection

## Harvest & Post-Harvest Ag Water (H/PH)

Washing, cooling, spraying harvested produce

Water used during harvest

Ice

Water used for hand washing

Water used for cleaning food contact surfaces

# H/PH Ag Water Requirements

## **Subpart E**

- 112.41: Quality standard
- 112.42: Inspections and maintenance
- 112.43: Treatment
- 112.44(a): Microbial quality criterion
- 112.45(a): Measures
- 112.46(a) and (c): Testing
- 112.47: Who may test
- 112.48: Additional management and monitoring
- 112.50: Records

## **Subpart N**

- 112.151: Test methods

## **Subpart O**

- 112.161: Records requirements

<https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-112>

eCFR “21 CFR part 112”

# Microbial Water Quality Standard

H/PH Ag Water must:

- Be safe and of adequate sanitary quality for its intended use
- Contain no detectable generic *E. coli* per 100 ml sample
- Cannot be from an untreated surface water source



# Testing

- Each **H/PH Ag Water** source must be tested 4x in the first year, then 1x a year in subsequent years.
- If a test fails, the farm must take corrective measures (see later slide) and take 4x new tests.
- Testing is NOT required if **H/PH Ag Water** is from a Public Water System or public water supply that meets microbial standards OR if the water is treated (see later slide).



**Records required.**

# Water System Inspections and Maintenance

- Farms must inspect **H/PH Ag Water** distribution systems under their control at least annually to identify and correct conditions that can introduce hazards,

AND

- Conduct maintenance as needed based on the findings of the water system inspection.



**Records required.**

# Water System Inspections and Maintenance

Examples:

- ✓ Check well heads are maintained and protected from runoff from surrounding area
- ✓ Ensure backflow prevention is installed and working correctly
- ✓ Inspect and maintain water treatment devices
- ✓ Inspect, maintain, clean, and sanitize ice machines
- ✓ Conduct other routine system maintenance

# Water Treatment

Not required, but if you treat your water:

- Treatment must be effective and delivered to ensure the water is consistently safe and of adequate sanitary quality for its intended use and/or meets microbial standard.
- Treatment may be physical, chemical or a combination.
- Treatment must be monitored.



**Records required.**

# Corrective Measures

- You must immediately discontinue using H/PH Ag Water if at any time it doesn't meet water quality standards or is no longer safe.

- In order to resume use, you must:

Re-inspect the system and make changes as needed,

OR

Treat the water according to treatment requirements.



**Records required.**

# Additional Management & Monitoring

## General:

- Manage **H/PH ag water** to maintain its safety and quality and minimize the potential for it to serve as a source of contamination.

## Specific:

- Establish and follow water-change schedules for batch or re-circulated **H/PH ag water**.
- Visually monitor the quality of water for buildup of organic material.
- Maintain and monitor the temperature of **H/PH ag water** as appropriate to minimize the potential for infiltration of pathogens into produce.

# Worker Training

Subpart C – Personnel Qualifications & Training requires:

- All workers who supervise or handle covered produce or food contact surfaces must receive annual training on produce safety topics related to their duties.

Key workers to train on **H/PH Ag Water** may include:

- Farm Managers
- Wash/pack leads
- Harvest crew leads
- Maintenance crew (if responsible for water system maintenance)



# Records

- Findings of annual **H/PH ag water** system inspections
- Water test results
- Documentation from public water systems such as a certificate of compliance
- Documentation of correction actions taken
- Documentation of adequate treatment methods (if using)
- Treatment monitoring logs





# SOPs/Documents

Encouraged but not required:

- Worker training manual on [H/PH Ag Water](#) protocols
- Water distribution map
- Water change schedules
- How to safely handle and use sanitizer in wash water
- Water and produce temperature monitoring (to prevent infiltration)
- Corrective action plan if water sample tests positive

# Inspectional Approach

- First year is an educational approach to allow farms to adjust to new requirements.
- Large farms must begin collecting their water samples (4x per water source in first year). Samples must be representative of use and should be taken throughout the growing season.

# Resources

- Example record templates are available
- Produce Safety Alliance Grower Training Manual
- FDA Harvest and Post harvest Agricultural Water Fact Sheet
- Water Testing Labs (NECAFS Clearing House)
- Water sampling instructions (factsheet and video)
- Sanitizer Dose Calculator (UVM Ag Engineering)

<https://agriculture.vermont.gov/food-safety/produce-program/produce-safety-resources>

# Questions/Discussion

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