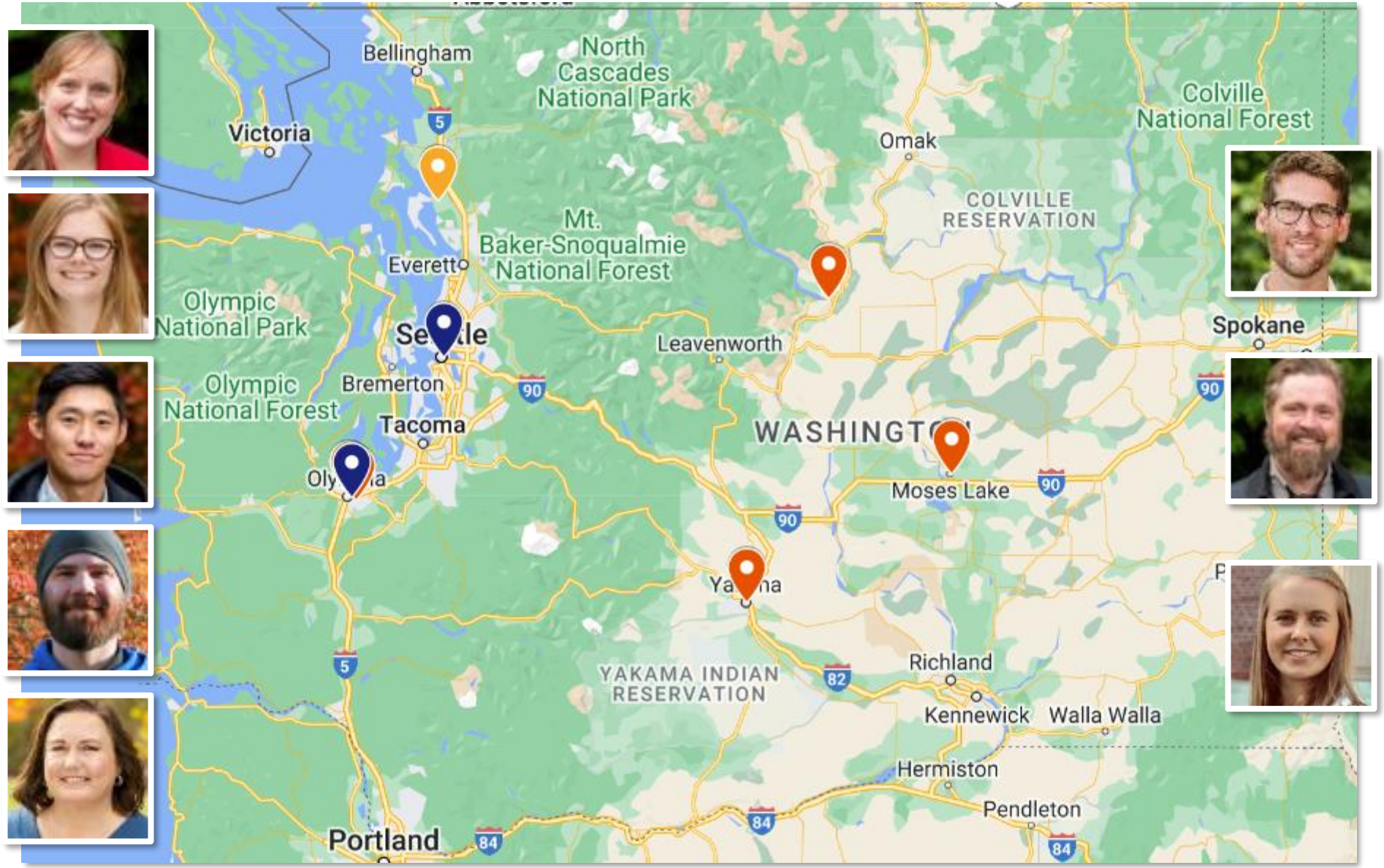
Overview of the Ag Water Rule

Connie Fisk, *WSDA Produce Safety Program Manager*
January 14, 2025

Washington State Department of Agriculture

The WSDA Produce Safety Team



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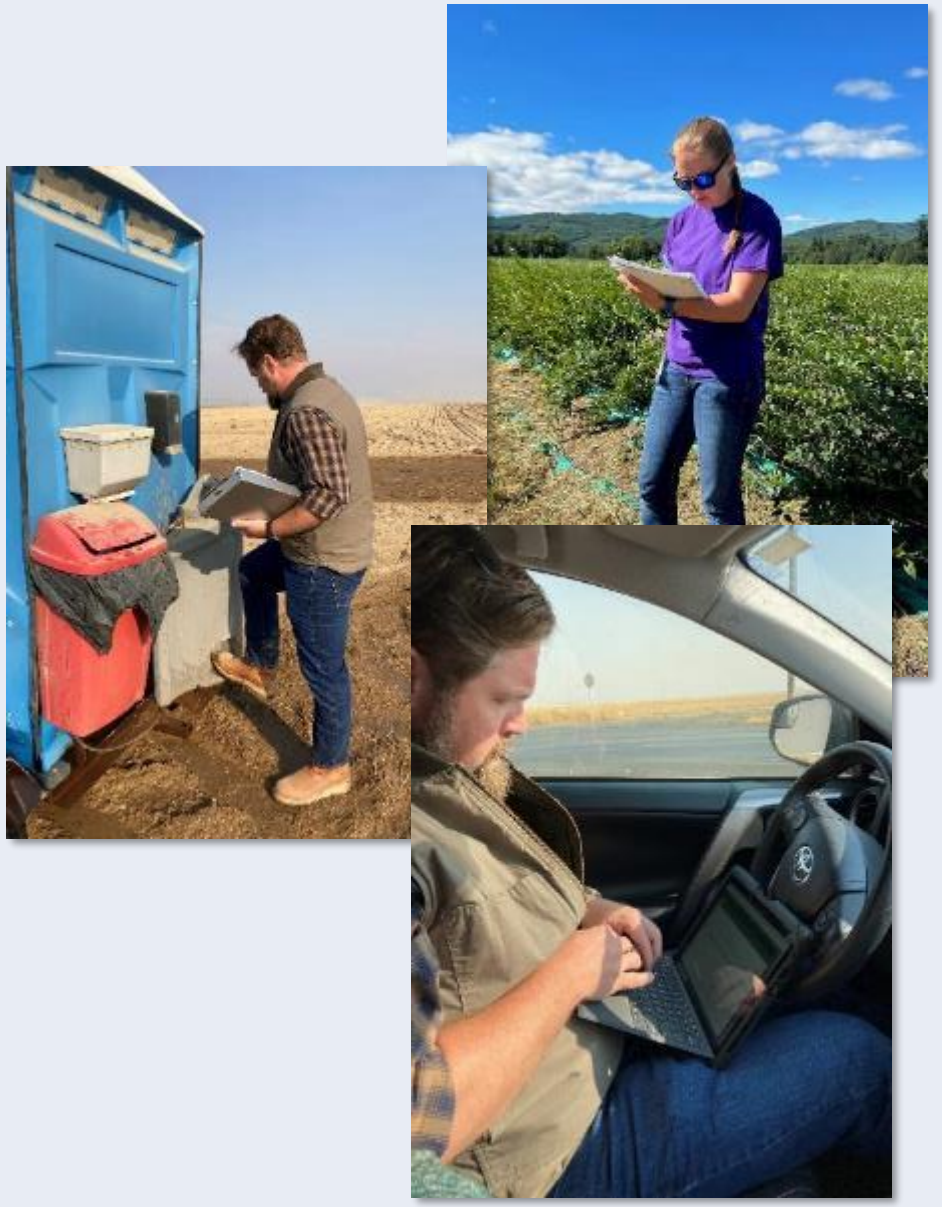
Produce Farm Inspections

- On-farm during harvest
- Farm walk-through:
  - Workers: health, hygiene, & training
  - Soil amendments
  - Wildlife, domesticated animals, & land use
  - Agricultural water
  - Buildings, toilet & handwashing facilities
  - Postharvest handling
  - Cleaning & sanitizing
- Records review
- Exit interview to discuss observations



Washington State Department of Agriculture
Produce Safety Program
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PRODUCE FARM INSPECTION CRITERIA

The following list of criteria is based on Chapter 15.135 RCW (Revised Code of Washington) Produce Safety Rule Implementation.

NO	CRITERIA
	PERSONNEL QUALIFICATIONS & TRAINING (21 CFR 112, Subpart C)
1	Personnel training presentation adequate for intended audience, appropriate for duties, and frequency: **21 CFR, 112.21** Minimum training requirements for all personnel including food safety, personal health, hygiene, and regulatory standards. Specific training requirements for harvest personnel and supervisors at least annually: **21 CFR, 112.22** At least one supervisory or responsible party has received standard training recognized as adequate by the FDA: **21 CFR, 112.22(c)**
2	Personnel identified to supervise or be responsible for farm operations to ensure compliance with the Produce Safety Rule: **21 CFR, 112.23**
3	Records for required training established, reviewed, dated and signed by supervisor/responsible party: **21 CFR, 112.30**
	HEALTH & HYGIENE (21 CFR 112, Subpart D)
4	Measures implemented to prevent produce contamination from ill or infected workers: **21 CFR, 112.31**
5	Hygienic practices to protect covered produce or food contact surfaces, including personal cleanliness, animal contact, hand washing, gloves, jewelry, foods, gum, and tobacco use: **21 CFR, 112.32**
6	Visitor policies and procedures including toilet and hand wash access: **21 CFR, 112.33**
	AGRICULTURAL WATER (21 CFR 112, Subpart E)
7	Agricultural water must be safe and of adequate sanitary quality for intended use: **21 CFR, 112.41**
8	Agricultural water source and distribution system inspected annually and maintained: **21 CFR, 112.42**
9	Treated agricultural water including water treatment effectiveness, consistency, and monitoring: **21 CFR, 112.43**
10	Microbial quality criteria applicable to agricultural water used for certain intended uses: **21 CFR, 112.44**
11	Action taken if water does not meet safe and adequate standard: **21 CFR, 112.45(a)**
12	Results or certificates of compliance from public water supply or water treated in accordance with the requirements of 112.43: **21 CFR, 112.46(a)** Requirements for performing agricultural water tests: **21 CFR, 112.47**
13	Water used during harvest, packing, and holding for covered produce managed to maintain its safety and adequate sanitary quality: **21 CFR, 112.48**
14	Records for findings of agricultural water system inspection; analytical tests conducted on agricultural water; scientific data or information to support adequacy of a method or alternatives; results of water treatment monitoring; actions taken in accordance with 112.45; results or certificates of compliance from public water system are established and kept: **21 CFR, 112.50**
	BIOLOGICAL SOIL AMENDMENTS OF ANIMAL ORIGIN & HUMAN WASTE (21 CFR 112, Subpart F)
15	Handling, conveyance, and storage of soil amendments of animal origin to prevent the contamination of food, food contact surfaces, and agricultural water sources and systems: **21 CFR, 112.52**
16	Prohibits the use of human waste except sewage sludge bio-solids as per 40 CFR part 503 Subpart D: **21 CFR, 112.53**
17	Acceptable treatment processes for soil amendments of animal origin are used: **21 CFR, 112.54** Microbiological standards for treated soil amendments of animal origin are met: **21 CFR, 112.55** Application requirements for soil amendments of animal origin: **21 CFR, 112.56**
18	Records for biological soil amendments of animal origin are established and kept: **21 CFR, 112.60**
	DOMESTICATED & WILD ANIMALS (21 CFR 112, Subpart I)
19	Relevant areas are assessed during the growing season, evaluated for potential produce contamination from animals, and measures are taken to prevent the later harvest of potentially contaminated produce during the growing season: **21 CFR, 112.83**
	GROWING, HARVESTING, PACKING, & HOLDING ACTIVITIES (21 CFR 112, Subpart K)
20	Excluded produce is kept separate from covered produce, and shared food contact surfaces are cleaned and sanitized between uses: **21 CFR, 112.111**
21	Measures taken to identify and not harvest produce likely contaminated with foreseeable hazards including animal excreta, including a visual assessment of the growing area and crop: **21 CFR, 112.112**
22	Harvested produce handled in a manner that protects against contamination, including avoiding the contact of cut surfaces with soil: **21 CFR, 112.113**
23	Prohibits the distribution of dropped covered produce: **21 CFR, 112.114**
24	Produce that is susceptible to the hazard of *Clostridium botulinum* growth and toxin formation packaged in a manner that prevents this hazard: **21 CFR, 112.115**
25	Food packing materials adequate for intended use, including being cleanable or designed for single use, being clean, and unlikely to support bacterial growth or transfer: **21 CFR, 112.116**
	EQUIPMENT, TOOLS, BUILDINGS, & SANITATION (21 CFR 112, Subpart L)
26	Equipment and tools of adequate design, construction, and workmanship and installation to enable them to be adequately cleaned and maintained, sanitary maintenance occurs at a frequency adequate to prevent contamination and includes equipment, food contact surfaces, and non-food contact surfaces as well as adjacent spaces and conveyance such as forklifts, tractors, and other vehicles: **21 CFR, 112.123(a)** Equipment and tools installed, maintained, and stored to facilitate cleaning of the equipment and of all adjacent spaces and protect covered produce from being contaminated with known or reasonably foreseeable hazards and from attracting and harboring pests. Seams must be smoothly bonded or maintained to minimize accumulation of dirt, filth, food particles, and organic matter: **21 CFR, 112.123 (b) and (c)** Food contact surfaces of equipment and tools inspected, maintained, cleaned and when necessary sanitized as frequently as reasonably necessary and used in a manner that minimizes the potential contamination of covered produce. Non-food contact surfaces of equipment and tools used during harvest, packing, and holding maintained and cleaned as frequently as reasonably necessary and used in a manner that minimizes the potential contamination of covered produce: **21 CFR, 112.123(d) and (e)**
27	Instruments or controls to measure, regulate, or record temperatures, pH, sanitizer efficacy or other conditions to control or prevent the growth of microorganisms of public health concern must be accurate, precise, maintained, and of adequate number: **21 CFR, 112.124**
28	Equipment used to transport produce must be clean and adequate for use: **21 CFR, 112.125**
29	Building size, construction, and design requirements for the prevention of produce contamination, including drains, pipes, floors, walls, fixtures, and ceilings: **21 CFR, 112.126**
30	Requirements to prevent produce contamination from domesticated animals in and around enclosed buildings through exclusion or separation: **21 CFR, 112.127**
31	Pest control requirements for fully and partially enclosed buildings: **21 CFR, 112.128**
32	Toilet facility requirements: **21 CFR, 112.129**
33	Hand washing facility requirements: **21 CFR, 112.130**
34	Sewage control and disposal requirements: **21 CFR, 112.131**
35	Trash, litter, and waste control and disposal requirements: **21 CFR, 112.132**
36	Plumbing requirements: **21 CFR, 112.133**
37	Requirements to control animal excreta and litter from domesticated animals: **21 CFR, 112.134**
38	Records of the cleaning and sanitizing of equipment are established and kept: **21 CFR, 112.140**
	SPROUTS (21 CFR 112, Subpart M)
39	Measures taken to prevent introduction of known or reasonably foreseeable hazards into or onto seeds or beans, including discontinue use of all seeds or beans thought to be contaminated, visually examine seeds or beans and packaging for hazards, and treating seeds or beans or relying on prior treatment of seeds or beans: **21 CFR, 112.142**
40	Sprouts are grown, harvested, packed and held in fully-enclosed buildings: **21 CFR, 112.143(a)**
41	Food contact surfaces used to grow, harvest, pack, or hold sprouts are cleaned and sanitized before contact with sprouts, seeds, or beans used to grow sprouts: **21 CFR, 112.143(b)**
42	Environmental monitoring testing of growing, harvesting, packing, and holding environment in accordance with 112.145: **21 CFR, 112.144(a)** Requirements for establishing an environmental monitoring plan for growing, harvesting, packing, and holding environment for *Listeria* species or *L. monocytogenes*: **21 CFR, 112.145** Action taken if growing, harvesting, packing, and holding environment tests detect *Listeria* species or *L. monocytogenes*: **21 CFR, 112.146**
43	Testing spent sprout irrigation water or sprouts for pathogens in accordance with 112.147: **21 CFR, 112.144(b) and (c)** Requirements for establishing and implementing a written sampling plan for collecting and testing samples of spent sprout irrigation water for sprouts for pathogens: **21 CFR, 112.147** Action taken if spent sprout irrigation water or sprouts test positive for a pathogen: **21 CFR, 112.148**
44	Records for sprouts are established and kept: **21 CFR, 112.150**
	RECORDS (21 CFR 112, Subpart O)
45	Records required under the rule meet all general requirements: **21 CFR, 112.161** Records retained for the required length of time: **21 CFR, 112.164**

https://agr.wa.gov/departments/food-safety/produce-safety/produce-inspections

Important Dates

Business Size	Compliance Dates for All Non-Sprout Covered Produce	Agricultural Water	
		Pre-harvest	Harvest, Postharvest
All other businesses (>$500K)	1/26/2018	4/7/2025	1/26/2023
Small businesses (>$250K-500K)	1/28/2019	4/6/2026	1/26/2024
Very small businesses (>$25K-250K)	1/27/2020	4/5/2027	1/26/2025
		Compliance Dates	*Enforcement Dates*

Agricultural Water

- **Pre-harvest (Production) Water**
  - Water used in contact with produce during growth
  - Irrigation, fertigation, foliar sprays, frost protection
- **Postharvest Water**
  - Water used during or after harvest
  - Water contacting food contact surfaces, including hands

Think About Your Orchard

Pre-Harvest Water Uses Include:

- Irrigation
- Fertigation
- Crop sprays
- Cooling
- Frost protection
- Dust abatement
- Other uses where water directly contacts produce

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Why We're Here Today

Pre-Harvest Agricultural Water Requirements Have Changed

- FDA published a revision to Subpart E – Agricultural Water on May 06, 2024 (QR code and URL below)
  - https://www.fda.gov/food/food-safety-modernization-act-fsma/fsma-final-rule-pre-harvest-agricultural-water
- The revised Subpart E moves from reliance on testing pre-harvest water for decision making to an agricultural water assessment of the whole water system
- The expectation is that each grower understand their water quality and how their water management practices minimize risks to the crops they grow.
  - Should be prepared to explain during inspectional visits

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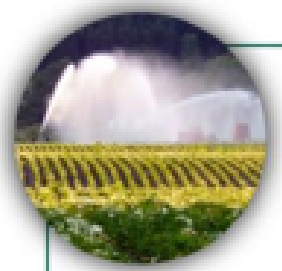
§112.40 What requirements of this subpart apply to my covered farm?

If you use agricultural water for this covered activity	Then you must meet these requirements		If applicable, you also must meet these requirements	
(a) Growing covered produce (other than sprouts)	§ 112.41	(quality standard)	§ 112.45	(measures)
	§ 112.42	(inspections and maintenance)	§ 112.46	(treatment)
	§ 112.43	(agricultural water assessment)	§ 112.47	(who may test)
	§ 112.50	(records)	§ 112.151	(test methods)
(c) Harvesting, packing, or holding covered produce	§ 112.41	(quality standard)	§ 112.44(b)	(testing untreated ground water)
	§ 112.42	(inspections and maintenance)	§ 112.45	(measures)
	§ 112.44(a)	(microbial quality criterion)	§ 112.46	(treatment)
	§ 112.44(d)	(additional management and monitoring)	§ 112.47	(who may test)
	§ 112.50	(records)	§ 112.151	(test methods)

§ 112.41 What requirements apply to the quality of my agricultural water?

- All agricultural water must be safe and of adequate sanitary quality for its intended use.

Image source: kxp13 on pixabay.com



Evaluating Risks Related to Pre-Harvest Water

Three main impact points for produce safety risks related to pre-harvest water are:

1. Pre-harvest water source and quality
   - Public water supply, ground water, surface water
   - Testing frequency and sampling location
2. Application method
   - Water that does not contact the harvestable portion
   - Water that contacts the harvestable portion of the crop
3. Timing of application
   - At planting or close to harvest

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§ 112.42 What requirements apply to inspecting and maintaining my agricultural water systems?

- From the Glossary: **Agricultural water system** means a source of agricultural water, the water distribution system, any building or structure that is part of the water distribution system (such as a well house, pump station, or shed), and any equipment used for application of agricultural water to covered produce during growing, harvesting, packing, or holding activities.

Annual Inspection of Your Agricultural Water Systems

§ 112.42(a) requires that at the beginning of a growing season, as appropriate but at least once annually, you must inspect all of your agricultural water systems, to the extent they are under your control, to identify any conditions that are reasonable likely to introduce known or reasonably foreseeable hazards into or onto covered produce or food contact surfaces, including considerations of:

(1) The nature of each agricultural water source (e.g., ground, surface water).

(2) The extent of your control over each water source.

(3) The degree of protection of each water source.

(4) Use of adjacent and nearby land.

(5) The likelihood of introduction of food safety hazards to agricultural water by another user before it reaches the farm.

Annual Inspection of Your Agricultural Water Systems – Record

- §112.50(b)(1) You must establish and keep records of the findings of inspections of your agricultural water systems

Agricultural Water System Inspection Record *Template (1 of 2)*

§§ 112.42(a)(1-5) Requirements Relating to Agricultural Water Source or System

Name and address of farm: _____

Date and time of inspection: _____ **Name and Initials:** _____

Water source ID	General description of water source	Nature of the source (e.g., ground, surface)	Extent of control over water source	Describe the extent of your control over the water. If water source is not under your full control, explain why.
Pond #1	*½ acre spring-fed pond, northwest of house*	*Surface*	*Partial control*	*Runoff from property to the northwest of farm property flows to pond*

Water source ID	Degree of protection from hazards	Describe the degree of protection for this water source	Describe potential concerns from adjacent and nearby land uses	Describe any prior uses of the water that may introduce hazards
Pond #1	*Mostly protected*	*Spring fed, only a little fill from runoff. No exclusion to prevent wildlife access to pond.*	*Property to the northwest of farm property is used as a horse grazing pasture*	*No prior users of the water*

Example record from PSA's fact sheet, *Records Required by the FSMA Produce Safety Rule*

Maintenance of Your Agricultural Water Systems

§ 112.42(b) requires that you maintain all of your agricultural water systems, to the extent they are under your control, as necessary and appropriate to prevent the systems from being a source of contamination, including:

(1) Regularly monitor each system to identify conditions reasonably likely to introduce reasonably foreseeable hazards.

(2) Correct any deficiencies (such as control to cross-connections and repairs to well caps).

(3) Properly store equipment and keep the source and distribution system free of debris, trash, domesticated animals, and other sources of contamination.

(4) As necessary, implement measures necessary to reduce the potential for contamination with pooled water.

§ 112.43 What requirements apply to assessing agricultural water used in growing covered produce (other than sprouts)?

- This is the biggest change to Subpart E
- From the Glossary: **Agricultural water assessment** means an evaluation of an agricultural water system, agricultural water practices, crop characteristics, environmental conditions, and other relevant factors (including test results, where appropriate) related to growing activities for covered produce (other than sprouts) to:

  (1) Identify any condition(s) that are reasonably likely to introduce known or reasonably foreseeable hazards into or onto covered produce or food contact surfaces; and

  (2) Determine whether measures are reasonably necessary to reduce the potential for contamination of covered produce or food contact surfaces with such known or reasonably foreseeable hazards.

Annual Agricultural Water Assessment – Record

- §112.50(b)(2) You must establish and keep records of your written agricultural water assessments, including descriptions of factors evaluated and written determinations.
- If you test your pre-harvest agricultural water as part of your assessments, you are required to maintain certain documentation related to your test results and procedures.
- Supervisors are required to review the written pre-harvest agricultural water assessments and the determinations made based on the outcomes of the assessments.

§ 112.43(b) Exemptions

- You do NOT need to prepare a written agricultural water assessment if:
  - The water is the same quality as harvest and postharvest agricultural water:
    - No detectable generic *E. coli* in 100 mL and meets other postharvest ag water testing requirements
    - Is not untreated surface water
  - The water is received from a public water system or supply with documentation (i.e., public system certificates of compliance, public supply generic *E. coli* monitoring results), OR
  - The water is treated in accordance with § 112.46.

  AND

  - It is reasonably likely that the water quality will not change prior to use.

§ 112.42 and § 112.43 Are Two Separate Requirements!

Agricultural Water Systems Inspection vs Agricultural Water Assessment

- They are two different things that each require a record.
- Agricultural water systems inspection covers each **agricultural water system**;
  - Applies to both pre-harvest and postharvest water
- Agricultural water assessment just applies to agricultural water used in growing covered produce (other than sprouts); pre-harvest water
- It is expected that results of the agricultural water systems inspection will be part of the agricultural water assessment

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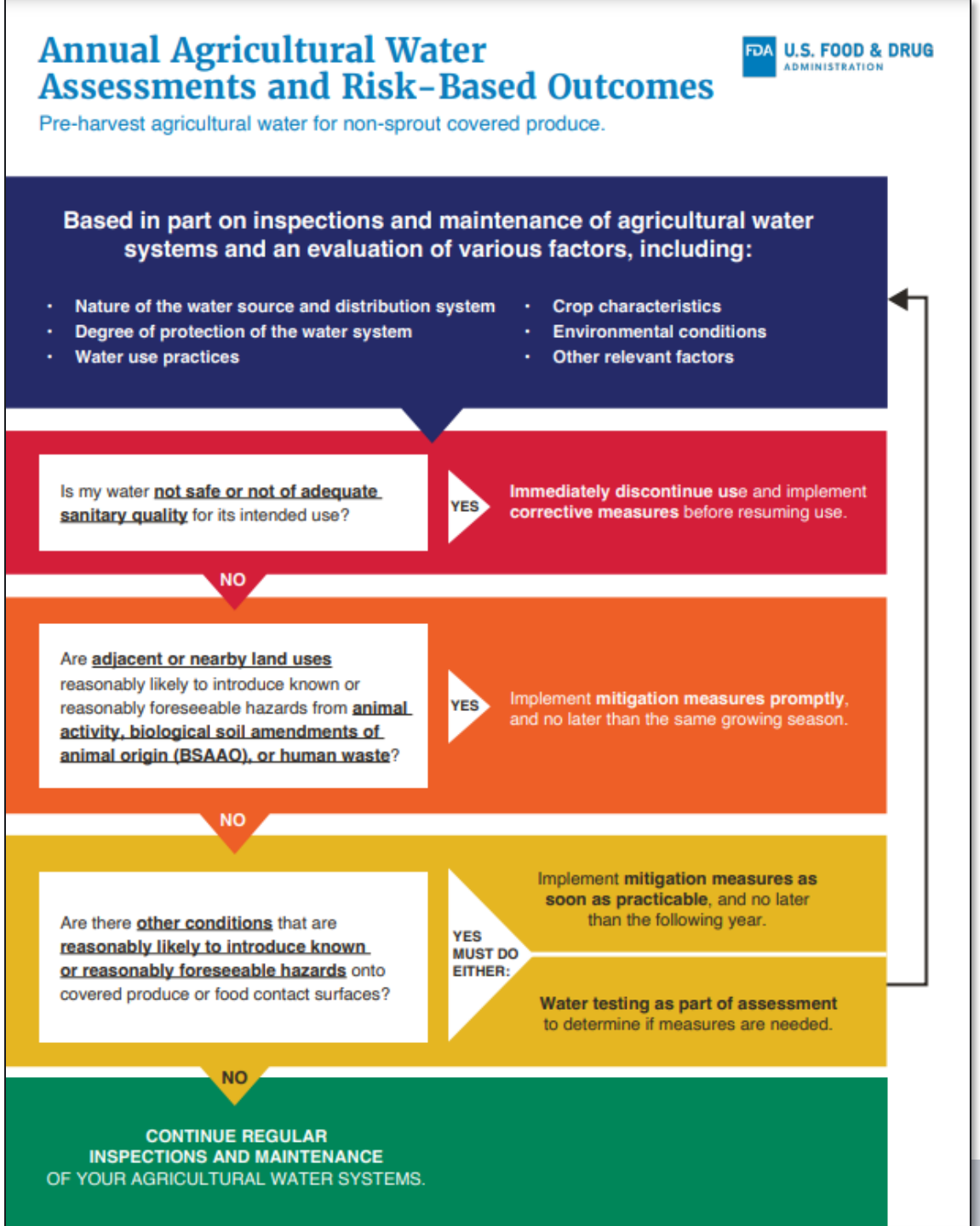
§ 112.45 What measures must I take for agricultural water to reduce the potential for contamination of covered produce or food contact surfaces with known or reasonably foreseeable hazards?



https://www.fda.gov/media/178219/download

Agricultural Water Assessment:

Outcomes follow a risk-based tiered approach

If…	*Then…*
Ag water not safe or not of adequate sanitary quality	Immediately discontinue use **AND** Take corrective measure(s) before use at pre-harvest
Condition(s) on adjacent or nearby land uses pose risk related to animal activity, BSAAO, or human waste	Implement mitigation measures promptly, and no later than the same growing season
Other conditions that may introduce known or reasonably foreseeable hazards, not related to animal activity, BSAAO, or human waste on adjacent or nearby lands	Implement mitigation measures as soon as practicable, and no later than the following year **OR** Test water as part of the agricultural water assessment and implement measures as needed
No known or reasonably foreseeable hazards for which mitigation is necessary	Inspect and maintain water system regularly and at least once a year

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Agricultural Water Assessment: Corrective and Mitigation Measures

Corrective measures	• Re-inspecting the entire affected agricultural water system under the farm's control and, among other steps, making necessary changes **OR** • Treating the water in accordance with the standards in FSMA PSR
Mitigation measures	• Making necessary changes such as repairs • Increasing time interval between last direct application and harvest (microbial die-off) • Increasing time interval between harvest and end of storage (microbial die-off) • Other activities that result in die-off or removal • Changing water application method • Treating water (PSR standards) • Taking alternative mitigation measures supported by scientific information

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Corrective or Mitigation Measures - Record

§112.50(b)(7) You must establish and keep records of actions you take in accordance with § 112.45

General reminders from § 112.161, records must:

- Be created at the time the activity is performed or observed
- Be accurate, legible, and indelible
- Be dated, and signed or initialed by the person who performed the activity

§ 112.46 What requirements apply to treating agricultural water?

(a) Any method you use to treat ag water must be effective to make the water safe and of adequate sanitary quality for its intended use

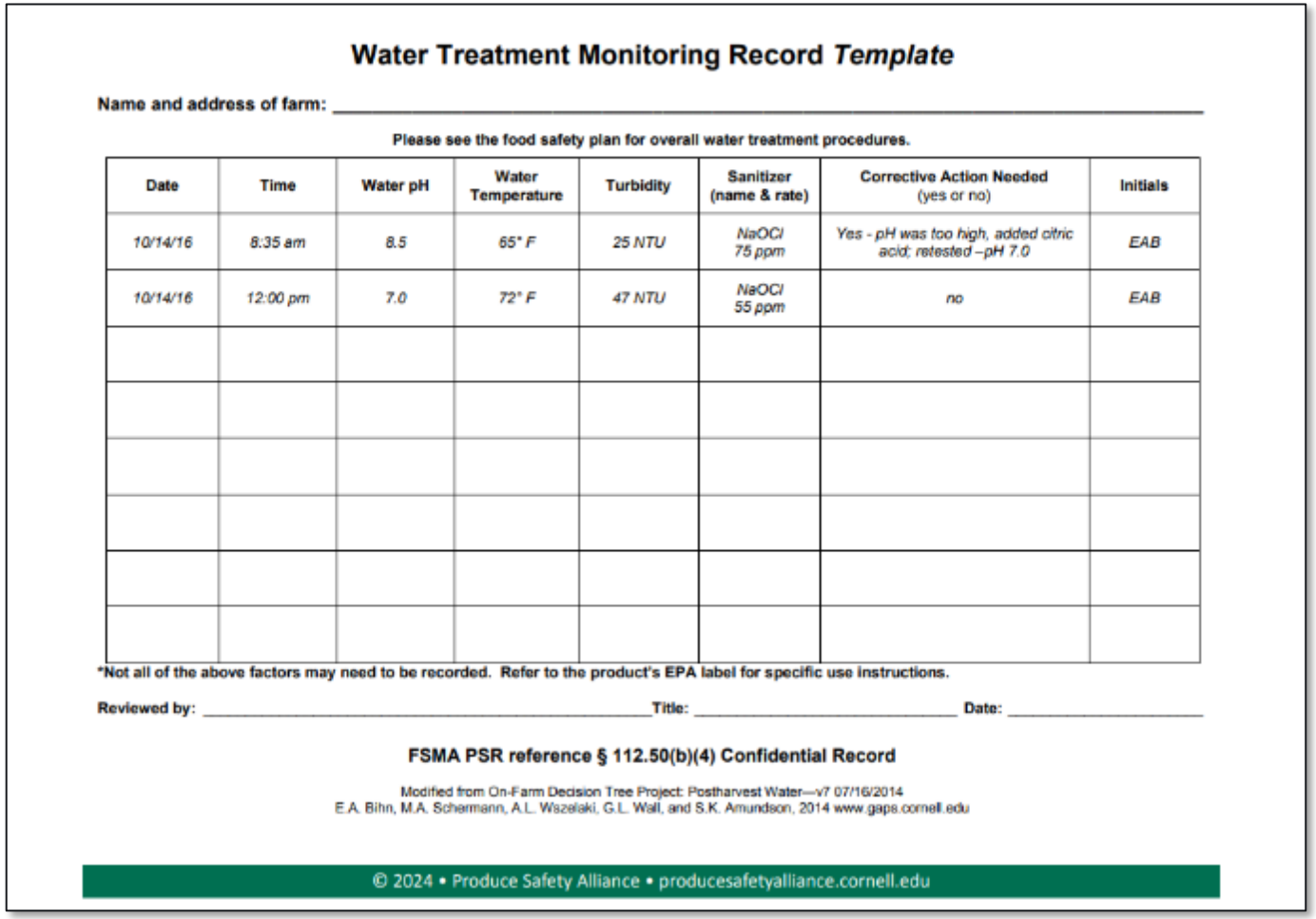
(b) You must deliver any treatment of agricultural water in a manner to ensure that the treated water is consistently safe and of adequate sanitary quality for its intended use

(c) You must monitor any treatment of agricultural water using an adequate method and frequency to ensure that the treated water is consistently safe and of adequate sanitary quality for its intended use

(d) Treatment may be conducted by you or by a person or entity acting on your behalf.

Water Treatment – Record

§112.50(b)(11) You must establish and keep records of the results of water treatment monitoring



Water Treatment Monitoring Record *Template*

Name and address of farm: _____

Please see the food safety plan for overall water treatment procedures.

Date	Time	Water pH	Water Temperature	Turbidity	Sanitizer (name & rate)	Corrective Action Needed (yes or no)	Initials
10/14/16	*8:35 am*	*8.5*	*65° F*	*25 NTU*	*NaOCl 75 ppm*	*Yes - pH was too high, added citric acid; retested –pH 7.0*	*EAB*
10/14/16	*12:00 pm*	*7.0*	*72° F*	*47 NTU*	*NaOCl 55 ppm*	*no*	*EAB*

***Not all of the above factors may need to be recorded. Refer to the product's EPA label for specific use instructions.**

Reviewed by: _____ **Title:** _____ **Date:** _____

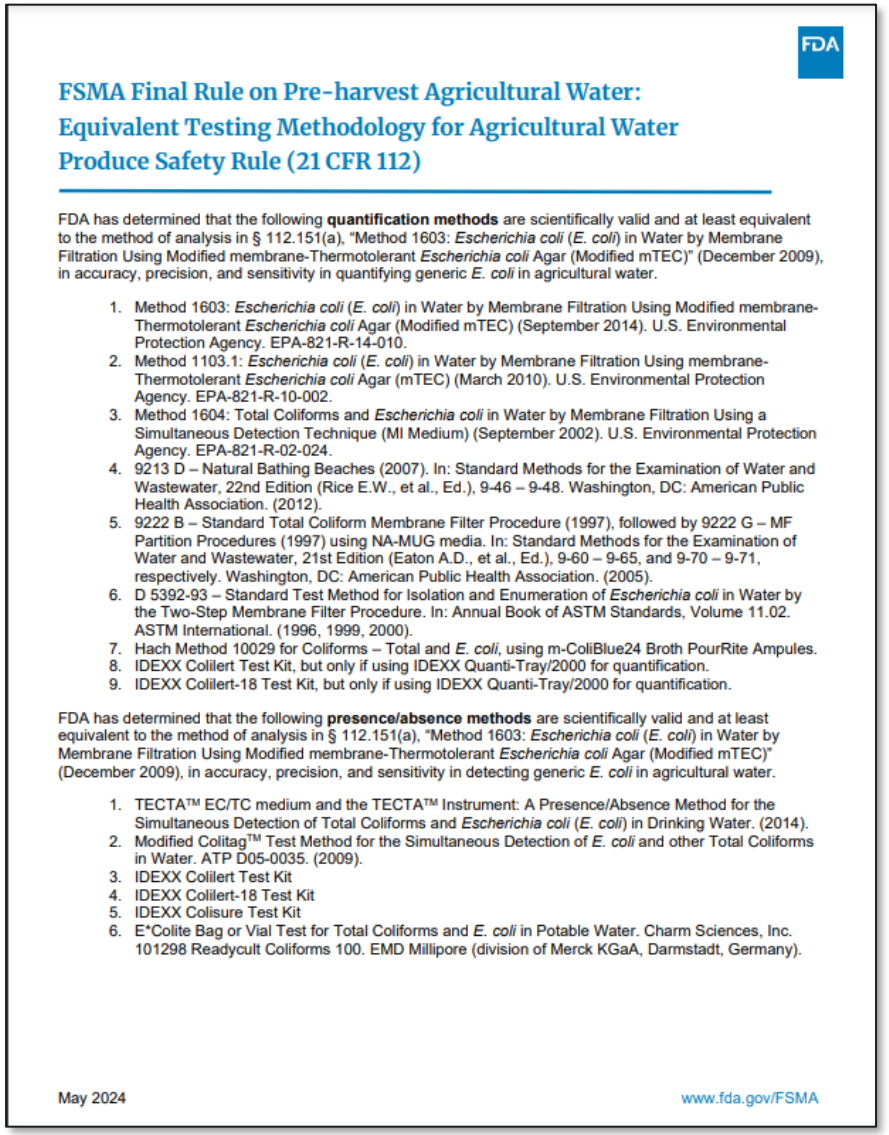
FSMA PSR reference § 112.50(b)(4) Confidential Record

Modified from On-Farm Decision Tree Project: Postharvest Water—v7 07/16/2014
E.A. Bihn, M.A. Schermann, A.L. Wszelaki, G.L. Wall, and S.K. Amundson, 2014 www.gaps.cornell.edu

Example record from PSA's fact sheet, *Records Required by the FSMA Produce Safety Rule*

§ 112.47 Who must perform the tests required under this subpart?

- Reminder: testing is no longer required for pre-harvest water
- Water testing may be a useful component of your ag water assessment
- Agricultural water samples must be aseptically collected and tested using one of the equivalent testing methods



FDA

FSMA Final Rule on Pre-harvest Agricultural Water: Equivalent Testing Methodology for Agricultural Water Produce Safety Rule (21 CFR 112)

FDA has determined that the following **quantification methods** are scientifically valid and at least equivalent to the method of analysis in § 112.151(a), "Method 1603: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using Modified membrane-Thermotolerant *Escherichia coli* Agar (Modified mTEC)" (December 2009), in accuracy, precision, and sensitivity in quantifying generic *E. coli* in agricultural water.

1. Method 1603: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using Modified membrane-Thermotolerant *Escherichia coli* Agar (Modified mTEC) (September 2014). U.S. Environmental Protection Agency. EPA-821-R-14-010.
2. Method 1103.1: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using membrane-Thermotolerant *Escherichia coli* Agar (mTEC) (March 2010). U.S. Environmental Protection Agency. EPA-821-R-10-002.
3. Method 1604: Total Coliforms and *Escherichia coli* in Water by Membrane Filtration Using a Simultaneous Detection Technique (MI Medium) (September 2002). U.S. Environmental Protection Agency. EPA-821-R-02-024.
4. 9213 D – Natural Bathing Beaches (2007). In: Standard Methods for the Examination of Water and Wastewater, 22nd Edition (Rice E.W., et al., Ed.), 9-46 – 9-48. Washington, DC: American Public Health Association. (2012).
5. 9222 B – Standard Total Coliform Membrane Filter Procedure (1997), followed by 9222 G – MF Partition Procedures (1997) using NA-MUG media. In: Standard Methods for the Examination of Water and Wastewater, 21st Edition (Eaton A.D., et al., Ed.), 9-60 – 9-65, and 9-70 – 9-71, respectively. Washington, DC: American Public Health Association. (2005).
6. D 5392-93 – Standard Test Method for Isolation and Enumeration of *Escherichia coli* in Water by the Two-Step Membrane Filter Procedure. In: Annual Book of ASTM Standards, Volume 11.02. ASTM International. (1996, 1999, 2000).
7. Hach Method 10029 for Coliforms – Total and *E. coli*, using m-ColiBlue24 Broth PourRite Ampules.
8. IDEXX Colilert Test Kit, but only if using IDEXX Quanti-Tray/2000 for quantification.
9. IDEXX Colilert-18 Test Kit, but only if using IDEXX Quanti-Tray/2000 for quantification.

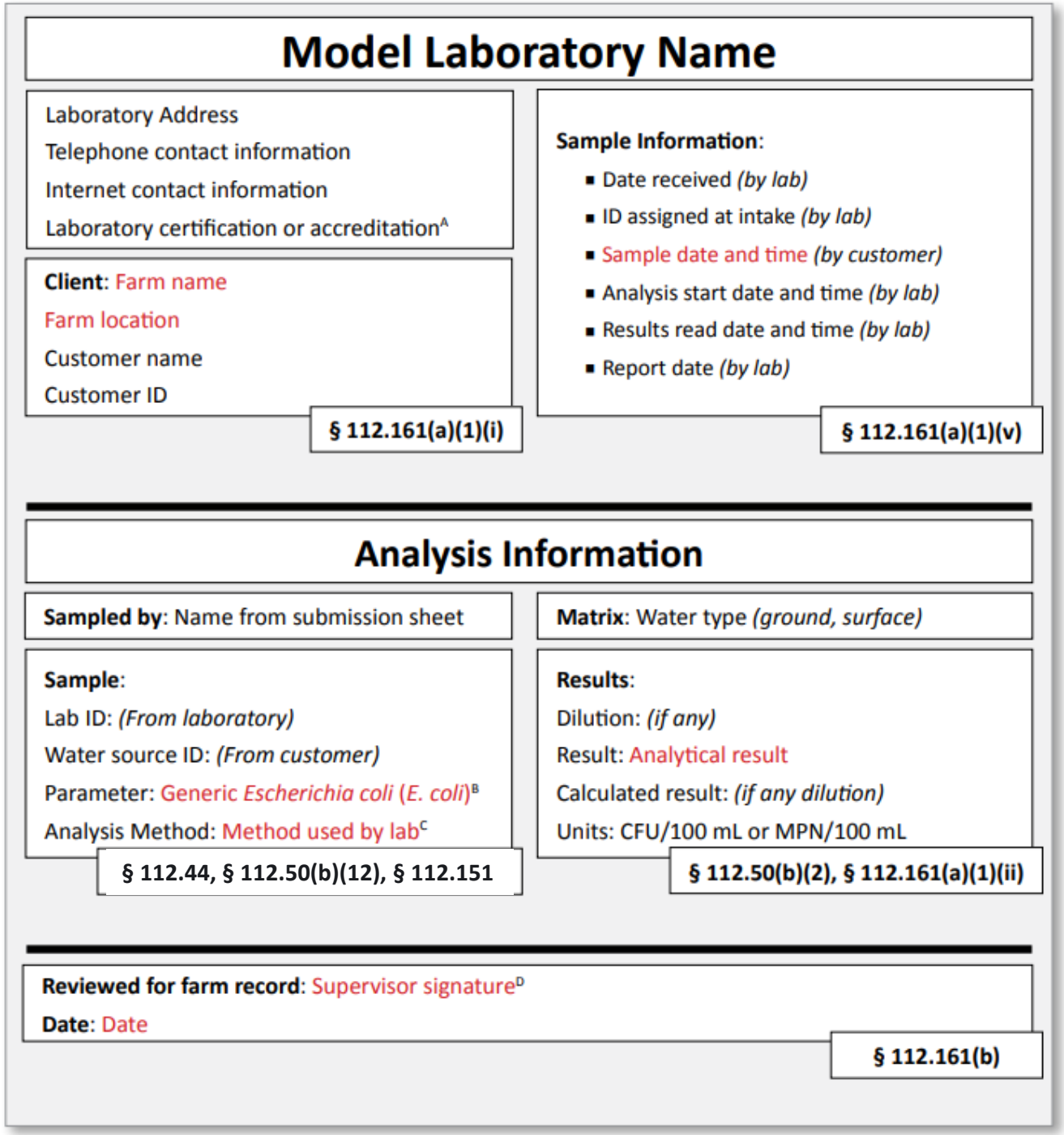
FDA has determined that the following **presence/absence methods** are scientifically valid and at least equivalent to the method of analysis in § 112.151(a), "Method 1603: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using Modified membrane-Thermotolerant *Escherichia coli* Agar (Modified mTEC)" (December 2009), in accuracy, precision, and sensitivity in detecting generic *E. coli* in agricultural water.

1. TECTA™ EC/TC medium and the TECTA™ Instrument: A Presence/Absence Method for the Simultaneous Detection of Total Coliforms and *Escherichia coli* (*E. coli*) in Drinking Water. (2014).
2. Modified Colitag™ Test Method for the Simultaneous Detection of *E. coli* and other Total Coliforms in Water. ATP D05-0035. (2009).
3. IDEXX Colilert Test Kit
4. IDEXX Colilert-18 Test Kit
5. IDEXX Colisure Test Kit
6. E*Colite Bag or Vial Test for Total Coliforms and *E. coli* in Potable Water. Charm Sciences, Inc. 101298 Readycult Coliforms 100. EMD Millipore (division of Merck KGaA, Darmstadt, Germany).

May 2024 www.fda.gov/FSMA

https://www.fda.gov/media/178224/download?attachment

Water Testing – Record



Model Laboratory Name

Laboratory Address
Telephone contact information
Internet contact information
Laboratory certification or accreditation[A]

Client: Farm name
Farm location
Customer name
Customer ID

§ 112.161(a)(1)(i)

Sample Information:

- Date received *(by lab)*
- ID assigned at intake *(by lab)*
- Sample date and time *(by customer)*
- Analysis start date and time *(by lab)*
- Results read date and time *(by lab)*
- Report date *(by lab)*

§ 112.161(a)(1)(v)

Analysis Information

Sampled by: Name from submission sheet

Matrix: Water type *(ground, surface)*

Sample:
Lab ID: *(From laboratory)*
Water source ID: *(From customer)*
Parameter: Generic *Escherichia coli* (*E. coli*)[B]
Analysis Method: Method used by lab[C]

§ 112.44, § 112.50(b)(12), § 112.151

Results:
Dilution: *(if any)*
Result: Analytical result
Calculated result: *(if any dilution)*
Units: CFU/100 mL or MPN/100 mL

§ 112.50(b)(2), § 112.161(a)(1)(ii)

Reviewed for farm record: Supervisor signature[D]
Date: Date

§ 112.161(b)

https://resources.producesafetyalliance.cornell.edu/documents/Documentation-Requirements-for-Water-Laboratory-Analysis-Results.pdf

§ 112.50 Under this subpart, what requirements apply regarding records?

Recordkeeping

Required records depend on farm practices.

- Farms that use pre-harvest agricultural water:
  - Findings of the inspection of water system
  - Agricultural water assessment descriptions of factors evaluated and determination OR documentation to support exemption
- Farms that test pre-harvest agricultural water as part of the agricultural water assessment:
  - Supporting information for use of any test organism other than generic *E. coli*
  - Supporting information for sampling frequency or any criterion used
  - Documentation of the results of analytical tests
  - Analytical method used for analysis, if other than EPA Method 1603

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§ 112.50, continued

Recordkeeping (part 2)

These required records also depend on farm practices:

- Farms that use water from a public system or supply
  - Annual documentation of test results or certificate(s) of compliance
- Farms that implement measures as an outcome of the agricultural water assessment
  - Documentation of measures
  - Supporting information for time interval or other practice to enhance microbial die-off or removal, if used
  - Supporting information for an alternative mitigation measure, if used
  - Supporting information for the adequacy of treatment, if used
  - Documentation of water treatment monitoring, if done

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Subpart E Inspection Summary

Ag water source(s), application method(s), timing

Ag water systems inspection and ag water assessment

Corrective or mitigation measures, treatment monitoring

Records

Questions?

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