

Subcommittee review and discuss

Line or Section of Matrix	Issue addressed	Previous Language	Rationale	New Proposed Language
474-476	Clarification of sample process	Collect three (3) 100 mL samples no closer than 20 minutes apart. Acceptance Criteria and Data Monitoring Criteria as outlined in Table 2D - Routine Monitoring of Microbial Water Quality must be met.	The intention is to sample water that is different. Taking samples from 3 different sprinklers will accomplish that goal and will simplify the sampling and documentation process making the process easier to implement and adhere to.	Collect three (3) 100 ml samples from 3 different sprinkler heads. Acceptance Criteria and Data Monitoring Criteria as outlined in Table 2D - Routine Monitoring of Microbial Water Quality must be met.
495	Best Practice Language for Type B Water	No previous language	To add clarity and awareness to emphasize caution with Type B water	Efforts should always be made, when using Type B water, to avoid contact with the edible portion of the crop within 21 days of a scheduled harvest.
497-505		No previous language		Furrow Irrigation Best Management Practices:
	Best Practice Language for Furrow Irrigation	No previous language	To add clarity and awareness to emphasize caution with Type B water	Agricultural practices, such as irrigation methods, bed configuration, etc., should be implemented in a manner to avoid water from breaching the top of the bed.

	Best Practice Language for Furrow Irrigation	No previous language	To add clarity and awareness to emphasize caution with Type B water	Agricultural practices, such as equipment movement, irrigation practices, etc., should be monitored at headland and tail ditch locations for damaged beds which may allow water to contact the edible portion of the crop.
	Best Practice Language for Furrow Irrigation	No previous language	To add clarity and awareness to emphasize caution with Type B water	Coordinate irrigation events with harvest, to the degree possible, to avoid saturation of the field soil to prevent excessive dirt and mud from getting on the edible portion of the crop, harvest tools (i.e. knives, gloves etc.) , and harvest equipment (i.e. machines, belts, trailers etc.) .
507-511		No previous language		Drip Tape Irrigation:
	Best Practice Language for Drip Tape Irrigation	No previous language	To add clarity and awareness to emphasize caution with Type B water	1. Drip tape should be handled, stored, used, and re-used in a manner that prevents damage and contamination to the drip tape. ☒
	Best Practice Language for Drip Tape Irrigation	No previous language	To add clarity and awareness to emphasize caution with Type B water	2. While in use, repairs to drip tape should be completed in a timely manner to prevent water contact with the edible portion of the crop.

Table 2A	Clarification of 35 day sampling requirement for Type B Water	After the first sample is shown to be within acceptance criteria, subsequent samples shall be collected no less frequently than monthly at points of use within the distribution system.	To create sampling language based on system approach and allow more flexibility in sampling	After the first sample is shown to be within acceptance criteria, subsequent samples shall be collected no less frequently than monthly (or at the next irrigation event if longer than monthly) at points of use within the distribution system.
Table 2A		Sampling Frequency:		Sampling Frequency:
Table 2A	Clarification of sampling requirement for Type B Water	One sample per agricultural water source shall be collected and tested prior to use if >60 days since last test of the water source. Additional samples shall be collected during use no less than 18 hrs apart and at least monthly during use from points within the delivery system.	To create sampling language based on system approach and allow more flexibility in sampling	One sample, per agricultural water source, shall be collected and tested prior to use if >60 days since last test of the water source. Additional samples shall be collected during use no less than 18 hrs apart and at least monthly (or at the next irrigation event if longer than monthly) during use from points within the delivery system.
Figure 1		Sampling Frequency:		Sampling frequency:
	Clarification of sampling requirement for Type B Water	Sampling Frequency: One sample per water source shall be collected and tested prior to use if >60 days since last test of the water source. Additional samples shall be collected no less than 18 hours apart and at least monthly during use.	To create sampling language based on system approach and allow more flexibility in sampling	Sampling Frequency: For Type B water, one sample per water source shall be collected and tested prior to use if >60 days since last test of the water source. Additional samples shall be collected during use, no less than 18 hours apart and at least monthly (or at the next irrigation event if greater than monthly) during use.
Figure 4	Clarification of sampling requirement for Type B to A Water	Sample monthly during use and test for generic E. coli and total coliform using a FDA-allowed method.	To create sampling language based on system approach and allow more flexibility in sampling	Sample monthly (or at the next irrigation event if greater than monthly) during use and test for generic E. coli and total coliform using a FDA-allowed method.
Table 2E		Routine Verification of Microbial Water Quality :		Routine Verification of Microbial Water Quality:
Right Column	Clarification of sampling requirement for Type B Water for overhead irrigation	No less than one (1) sample per month per water distribution system is required under these metrics. If there are multiple potential point-of-use sampling points in a water distribution system, then samples shall be taken from different point-of-use locations each subsequent month (randomize or rotate sample locations).	To create sampling language based on system approach and allow more flexibility in sampling	No less than one (1) sample per month (or at the next irrigation event) per water distribution system is required under these metrics. If there are multiple potential point-of-use sampling points in a water distribution system, then samples shall be taken from different point-of-use locations each subsequent sampling event (randomize or rotate sample locations).
Table 2E		Routine Verification Sampling Frequency:		Routine Verification Sampling Frequency:
Left column	Clarification of sampling requirement	Additional samples shall be collected no less than 18 hrs. apart and at least monthly during use from points within the water distribution system.	To create sampling language based on system approach and allow more flexibility in sampling	Additional samples shall be collected during use no less than 18 hrs. apart and at least monthly (or at the next irrigation event if greater than monthly) during use from points within the water distribution system.
Table 2G	Table Title is Confusing with Post Harvest off Farm Use	Post-Harvest Direct Product Contact and Food-Contact Surfaces	Clarification that standard relates to on farm water use	Post-Harvest Direct Product Contact and Harvest Food-Contact Surfaces <i>On Farm Practices Only</i>
		Sampling procedure:		Sampling procedure:

Left column of Table 2G	Clarification of Sampling Procedure for Post Harvest Water	100 mL sample collected aseptically at the point of use	To create sampling language based on system approach and allow more flexibility in sampling	Follow Type A Baseline language and sampling requirements.
		Sampling Frequency:		Sampling Frequency:
Left column of Table 2G	Clarification of Sampling Procedure for Post Harvest Water	One sample per water source shall be collected and tested prior to use if >60 days since last test of the water source.	To create sampling language based on system approach and allow more flexibility in sampling	Follow Type A Baseline language and sampling requirements.
Left column of Table 2G		Physical/Chemical Testing :		Physical/Chemical Testing :
Left column of Table 2G	Complicated Physical/Chemical Testing Procedures for Post Harvest Water	Target Variable: Water disinfectant (e.g., chlorine or other disinfectant compound, ORP). Multi Pass Water Acceptance Criteria: Chlorine > 1 ppm free chlorine after application and pH 5.5 – 7.5 OR ORP > 650 mV and pH 5.5 – 7.5 Other approved treatments per product EPA label for human pathogen reduction in water.	Simplify and create consistency in language and procedures throughout the standards	Follow B to A irrigation water treatment monitoring requirements.
Right column of Table 2G		Single Pass vs. Multiple Pass Systems		Single Pass vs. Multiple Pass Systems
Right Hand Column Table 2G	Provide options for testing Post-Harvest Water	Multi-pass use – Water must have non-detectable levels of E. coli and/or sufficient disinfectant to ensure returned water has no detectable E. coli (minimally 1 ppm chlorine).	Both E.coli and breakpoint disinfectant should be monitored	Multi-pass use – Water must have non-detectable levels of <i>E. coli</i> or sufficient disinfectant to ensure returned water has no detectable <i>E. coli</i>
Right Hand Column for Table 2G		Remedial Actions:		Remedial Actions:
	Remedial Actions Requirements for Post Harvest Water	No previous language	Provide language to cover out of compliance water	Develop an SOP that determines what corrective actions will be required when post harvest water does not meet acceptance criteria.
Figure 6		Acceptance Criteria		Acceptance Criteria

	Clarification of Acceptance Criteria for Post-Harvest Water.	Negative or below DL / 100 mL generic E. coli or >1 PPM free chlorine (pH 5.5 - 7.5) or >650 mV ORP (pH 5.5-7.5) after contact. REMOVE--change to no detect for generic E. coli/100 ml	Language Simplification	Non-detect for generic E. coli / 100 mL
		Action Level		Action Level
	Clarification of Remedial Actions for Post-Harvest Direct Contact Water	If water exceeding the acceptance criteria has been used postharvest, it is not appropriate microbial quality for this use. Sample and test product for STEC (including E. coli O157:H7) and Salmonella as described in Appendix C.		If water exceeding the acceptance criteria has been used postharvest, notify the handler of the water issue and determine an appropriate sampling and testing strategy for STEC (including E. coli O157:H7) and Salmonella as described in Appendix C or discard the product affected.
New		No previous language		Water used for aerial chemical applications within 21 days of a scheduled harvest
New	Clarification of water requirements for overhead chemical applications within 21 days of harvest	No Previous Language	Best Practices for overhead chemical applications, clarify requirements, written SOP needed	Develop a SOP for all of the overhead chemical application components. The SOP must address items such as: <ul style="list-style-type: none"> •Water used in overhead applications (e.g., pesticide and fertilizer, etc.) within the 21-days-to-harvest window must meet Type A and/or B→A water quality requirements •Holding tanks and equipment-mounted application tanks, manifold and boom lines, and nozzles MUST be regularly inspected and properly maintained and cleaned so they do not pose a contamination risk. •Water treatment chemistry shall be compatible with the agricultural chemicals being applied. •Procedures to control pest access to the equipment (examples may include: avian deterrents, fencing, and rodent monitoring) must be in place. (validation can include: PCA records, label requirements, letter of guarantee) •Procedures to ensure storage of equipment does not pose a contamination risk must be in place. •Establish corrective action procedures for non-compliance scenarios, including: a) treatment failure; b) contaminated source water; c) Pest concerns; d) Chemical incompatibility; e) Equipment sanitation concerns • Document all corrective measures, cleaning activities, and maintenance
				Type A Water:
	Record Keeping clarification for water used in chemical applications		Clarify need for records	Have records that demonstrate the water used for chemical applications meets Type A source water requirements. See Tables 2B and 2C for historical and/or baseline water quality requirements for source water that will be used for overhead applications.
				Type B to A Agricultural Water Treatment

	Clarification of treatment requirements for overhead applications of Type B to A		Clarify need for records	Type B water, used for overhead applications within 21 days of scheduled harvest, must be treated. With the start-up of any new treatment process it is important to evaluate all conditions that may affect water treatment efficacy and performance. Examples of parameters that provide valuable information about treatment efficacy in relationship to water quality are: o Turbidity o Total suspended solids o pH o Antimicrobial dose o Historical microbial monitoring data
	Clarification of documentation required for water used in overhead applications		Clarify need for water treatment records for overhead applications within 21 days of harvest	Develop a written Standard Operating Procedure (SOP) for each unique application process to treat water that will be used within 21 days of a scheduled harvest. Prior to 21 days-to-scheduled harvest conduct an initial water treatment assessment to establish treatment process parameters that will be monitored to ensure consistent treatment delivery and to demonstrate effectiveness. Repeat this assessment if a material change to your system occurs. Incorporate this assessment's findings into your water treatment SOP. A water treatment SOP should include : • Step-by-step instructions to ensure the water treatment is correctly implemented • Location of water sources • Name, and suggested supplies needed • Sanitizer used and quantity used • Critical limits and operational limits • Water sampling location • Corrective actions if critical limits are not met • Required records
Header				Develop a Baseline for Water Treatment
				Sample Size:
	Clarification of sampling requirements for water used in overhead applications.		The intent is to show treatment is effective over multiple treatment events and all three (3) samples are not from the same treatment batch.	A minimum of three (3), 100 mL, samples must be taken for each overhead application process (distinct water source, different sanitizer, different size water holding tank, etc) The three (3) samples must be taken from different treated water batches.
				Acceptance criteria (generic E. coli):
	Clarification of acceptance criteria for generic E. Coli in overhead applications		Acceptance criteria set for overhead application water	All three (3) samples must be non-detect for generic E. coli
				Ongoing Monitoring:

	Clarification of monitoring requirements for water used in overhead applications		Set requirements for monitoring of overhead application water	Between microbiological routine testing events records must be kept that verifies that each application event is conducted following the parameters established during the initial setup.
				Routine Testing :
	Clarification of sampling requirements for water used in chemical applications		Set requirements for sampling water used in chemical applications	A minimum of ONE (1) microbiological sample must be taken each month or at the next application event if no applications occur within the monthly time period.
				Acceptance Criteria :
	Clarification of acceptance criteria for water used in chemical applications		Set acceptance criterial	Non-detect for generic E. coli / 100 mL sample
				Corrective Actions:
				Acceptance Criteria
New	Establish corrective actions for water used in chemical applications	No previous language	New language for corrective actions when chemical application water does not meet requirements.	If microbiological testing shows that the water did not meet generic E. coli acceptance criteria, within 21 days of a scheduled harvest, perform a root cause analysis and correct the concern. The product must be tested for pathogens before harvest if this water was used in aerial application. Follow the product testing requirements outlined in Table 2F .
				Monitoring Event
New	Establish corrective actions for water treatment used in chemical applications	No previous language	New language for corrective actions when chemical application water does not meet requirements.	If monitoring shows that the water treatment parameters are not being met, <i>do not use the water</i> . <ul style="list-style-type: none"> •Perform a corrective action to assure the water treatment is effective before using the water. •Take a microbiological sample to verify that the treatment was effective and have that result as part of the corrective action documentation. •If the verification microbiological sample does not meet acceptance criteria perform a root cause analysis and correct the treatment process. Product must be tested for pathogens before harvesting. •Follow Table 2F for product testing requirements.