

# Preparing for implementation of agricultural water requirements

By Taylor O'Bannon, Matt Krug and Michelle Danyluk



In December 2021, the Food and Drug Administration (FDA) released its proposed changes to the Food Safety Modernization Act (FSMA) Produce Safety Rule (PSR) Subpart E, which covers agricultural water. The proposed changes focus solely on preharvest agricultural water and make no changes to the requirement of water used for harvest and postharvest activities.

Compliance with the requirements of Subpart E has been delayed, since December 2019, to allow FDA adequate time to identify more appropriate risk-reduction strategies for managing agricultural water quality. In July 2022, FDA issued a supplemental notice of proposed rulemaking related to compliance dates for agricultural water. As the December 2021 rule did not propose substantive changes to harvest and postharvest agricultural water requirements, these requirements will be enforced beginning Jan. 26, 2023, for all operations that do not meet the definitions of small or very small businesses. Subsequent compliance dates for small and very small businesses are Jan. 26, 2024, and Jan. 26, 2025, respectively.

For production water, if finalized, the rule proposed in December 2021 would replace the microbial water-quality profile and testing

criteria with a systems-based preharvest agricultural water assessment. The assessment intends to take a more individualized approach to identify and reduce preharvest water-quality risks. The agricultural water assessment would include five main factors: agricultural water system(s), agricultural water practices, crop characteristics, environmental conditions and other relevant factors.

## AGRICULTURAL WATER SYSTEMS

The agricultural water systems component focuses on growers assessing risks based on the water source (ground or surface), the water distribution system (closed or open to the environment) and the system's protection from possible contaminants (adjacent land use, proximity to animals and other uses of the water system). Generally, water obtained from underground aquifers with a properly constructed well is considered lower risk than surface water sources open to the environment and more susceptible to contamination.

The water distribution system component identifies risks in open or closed systems. Growers may consider runoff, animal intrusion, upstream usage, discharge, seepage for open systems, and construction and maintenance

for closed systems. The system's protection from possible contamination includes addressing risks such as animal impacts, adjacent or nearby land use, animal activity, biological soil amendments and applying untreated or improperly treated human waste.

## AGRICULTURAL WATER PRACTICES

The agricultural water practices factor focuses on the method and timing of water application. The type of application method influences the extent that water is applied and contacts the harvestable portion of the crop. This factor focuses on the interval between the last direct application and harvest because environmental conditions impact the die-off of foodborne pathogens. Maximizing the time these pathogens are exposed to these conditions impacts their survivability and chances of entering the food supply chain.

## CROP CHARACTERISTICS

The crop characteristics factor intends to identify risks of surface adhesion and internalization of hazards depending on the crop type or specific weather events. Certain crops will be more susceptible to surface adhesion based on their physical characteristics (porous, netted, etc.). Current data does



not indicate citrus will be considered more susceptible. Physical damage during weather events, such as freezing temperatures and hail damage, can make fruit more susceptible but is also not indicated for citrus.

## ENVIRONMENTAL CONDITIONS

The environmental conditions factor aims to address risks associated with the survival of pathogens in the growing environment. Conditions such as rainfall, extreme weather events, heavy winds, dry periods and air temperature can impact the physical, chemical and biological conditions that either support bacterial die-off or survival.

## OTHER RELEVANT FACTORS

Every farm is different and might consider other factors to make informed decisions about their production water quality.

## NEXT STEPS

In addition to proposing compliance dates for harvest and postharvest water in July 2022, FDA also proposed effective dates for production water. The proposed effective dates for production water are nine months after the effective date of a final rule for all businesses not meeting the definitions of a small or very small business. Subsequent compliance dates for small and very small businesses are one year and nine months and two years and nine months, respectively, after the effective date of a final rule.

It is anticipated that there will be a steep learning curve for educators, regulators and growers on how to complete an effective systems-based preharvest agricultural water assessment. In the meantime, growers should monitor their water source, review any microbial data relevant to their water source and use practices that lower the potential risk for contamination via preharvest water.

## RESOURCES AVAILABLE

More information about the proposed changes can be found on the FDA website or the Agricultural Water Assessment Fact Sheet ([fda.gov/media/154334/download](https://www.fda.gov/media/154334/download)). The FDA also has an Expanded Table on the Factors to be Considered as Part of

Agricultural Water Assessment ([fda.gov/media/154447/download](https://www.fda.gov/media/154447/download)) on the risks that may be assessed. In addition, growers may use the FDA Ag Water Assessment Builder ([agwaterassessment.fda.gov](https://www.agwaterassessment.fda.gov)) to answer questions and/or fill in information specific to their unique conditions.

On-Farm Readiness Reviews (OFRR) are another way growers can receive assistance implementing food-safety principles or the PSR on their farms. Visit [fdacs.gov/OFRR](https://www.fdac.gov/OFRR) to request an OFRR. Contact [UFFoodSafety@ifas](mailto:UFFoodSafety@ifas).

[ufl.edu](https://ufl.edu) for more information about the PSR requirements or questions about proposed rule changes. 🍊

*Taylor O'Bannon is a state food safety Extension agent, and Michelle Danyluk is a professor, both at the University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) Citrus Research and Education Center in Lake Alfred. Matt Krug is a state food science Extension agent at the UF/IFAS Southwest Florida Research and Education Center in Immokalee.*

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