BALANCING FOOD SAFETY AND SUSTAINABILITY

Opportunities for Co-management – Irrigation Water Storage

*This is one of a series of resource sheets for **food safety auditors** that describe conservation practices commonly used in agriculture's production environment.*

Images of Irrigation Reservoir[1] and Structure for Water Control[2] adjacent to the production environment

This information can help you to

Recognize irrigation water storage in the agricultural environment.

Understand the purposes irrigation water storage serve in the agricultural environment.

Recognize the language growers may use to explain why these practices are important in their production environment.

Understand when audit standards may consider Irrigation Reservoirs and Structures for Water Control as addressing farming impacts on the environment and and/or as potential contributors to food safety risk.

[1] This practice is currently listed as Irrigation Reservoir #436 by the USDA Natural Resources Conservation Service. The NRCS National Practice Standards are updated regularly. Check website for latest standard information.
[2] This practice is currently listed as Structure for Water Control #587 by the USDA Natural Resources Conservation Service. The NRCS National Practice Standards are updated regularly. Check website for latest standard information.

Irrigation Reservoirs are irrigation water storage structures for the purpose of holding the water in storage until it can be beneficially used to meet crop requirements. Irrigation storage reservoirs are designed to be filled during periods of low irrigation demand to provide water for periods of high demand.

Structures for Water Control are structures in both irrigation or drainage water management systems that convey water, control the direction or flow rate, or maintain a desired water surface elevation. The purpose is to control the level, discharge, distribution, delivery, or direction of flow of water in open channels or water use areas. For water quality protection, a series of structures are used to slow water velocity and reduce potential for soil erosion.

	Advantages[1]	Disadvantages
Irrigation Reservoir	• Improves management of irrigation water • Provides storage of water for reuse • Allows great flexibility in irrigation scheduling • Consistent availability of water supply	• More dissolved substances could reach the groundwater • Potential adverse effects for wildlife communities, depending on reservoir site. • Requires extensive engineering and earthwork • May attract wildlife and bird pests
Structure for Water Control	• Reduces runoff • Reduces erosion in irrigation or drainage channels	

[1]From Farm Water Quality Management Practice Sheets Irrigation Reservoir #436; Structure for Water Control #587

In some audit standards these practices may help producers to demonstrate knowledge of the impacts of farming on the environment, including water quality impairments from sediments. They may trigger concerns about animal activity, fecal contamination, or proximity to habitat for wildlife and/or water of unknown quality.

Scenarios

Barriers are installed to prevent wildlife from using irrigation reservoirs as a water source.

Additional Resources

Balancing Food Safety and Sustainability: Opportunities for Co-management, 2012

Additional resources on co-management of food safety and sustainability may be found at on the UC Food Safety Website under the Pre- and Post-Harvest Produce link. You can also contact Mary Bianchi, UC Cooperative Extension Emeritus Farm Advisor in San Luis Obispo County at mlbianchi@ucanr.edu.