United States Department of Agriculture

Conservation Practice Standard Overview

Irrigation Water Management (449)

Irrigation water management is the process of determining and controlling the volume, frequency, and application rate of irrigation water in a planned, efficient manner.

Practice Information

Irrigation water management is primarily used to manage soil moisture to promote plant growth. It can also be used to optimize use of available water supplies, minimize irrigation-induced erosion, reduce surface and groundwater pollution, manage salts in the root zone, and provide for safe chemigation or fertigation. Additional uses include management of air, soil, or plant microclimates and dust control.

Proper irrigation scheduling is the most critical component of this practice. The operator must understand when it is time to irrigate, how much water to apply, and where the water is going when it is applied. The operator must also know how to prevent erosion and groundwater contamination and how to adjust the system to account for these concerns. Additional specialized requirements apply to surface, subsurface, and pressurized irrigation systems.

When irrigation is used for chemical, nutrient, or wastewater application, it should be scheduled to coincide with the irrigation cycle

in order to avoid excess runoff to surface water or leaching to groundwater.

Irrigation water management is an annual practice that may change with the crops grown.

Common Associated Practices

Irrigation Water Management (449) is a required component when conservation practices Sprinkler System (442), Irrigation System, Microirrigation (441), or Irrigation System, Surface and Subsurface (443) are used.

For further information, contact your local NRCS field office.