



Conservation Practice Overview

July 2022

Irrigation System, Surface and Subsurface (Code 443)

A system that delivers irrigation water by surface means, such as furrows, borders, and contour levees, or by subsurface means through water table control.

Practice Information

With surface irrigation systems, water is directly applied to the soil surface in a way that does not cause excessive water loss, erosion, or water quality impairment. This can be done with delivery ditches, pipelines, or above ground multi-outlet water pipes. The soils in the field should not be excessively permeable to avoid seepage losses. Water that runs off the end of the field can be captured and recycled with the use of a tailwater recovery system.



Subsurface irrigation systems are designed to maintain the water table at predetermined design elevations below the ground surface at all points in the field. The soils in the plant root zone must be permeable enough to allow lateral water movement from the ditches or perforated irrigation pipes. These soils must be underlain by a slowly permeable water-restrictive layer to keep the desired water table height. This combination of soils allows the producer to alter the water table elevation in a timely manner in order to meet the plant needs.

This practice has a minimum expected life of 15 years. Maintenance requirements include regular inspections, removal of sediment and debris, repair and revegetation of eroded areas and outlets, inspection and testing of pipeline and pumping equipment, and re-grading the fields to maintain the design grade in the direction of flow.

Common Associated Practices

An Irrigation System, Surface or Subsurface (Code 443) must be applied in conjunction with Irrigation Water Management (Code 449). Other practices it is commonly applied with include Irrigation Pipeline (Code 430), Irrigation Reservoir (Code 436), Irrigation System, Tailwater Recovery (Code 447), Irrigation Field Ditch (Code 388), Structure for Water Control (Code 587), Pumping Plant (Code 533), and Subsurface Drain (Code 606).

For further information, contact your local NRCS field office.