United States Department of Agriculture

Conservation Practice Standard Overview

Irrigation System, Microirrigation (441)

A microirrigation system, also known as drip or trickle irrigation, is used to make frequent application of small quantities of water on or below the soil surface, as drops, tiny streams or miniature spray through emitters, or applicators placed along a water delivery line.

Practice Information

Microirrigation systems are installed to efficiently and uniformly apply irrigation water and/or chemicals directly to the plant root zone and maintain soil moisture for optimum plant growth.

Microirrigation is also used to provide irrigation water to establish desired vegetation such as windbreaks, living snow fences, riparian forest buffers, and wildlife plantings.

Microirrigation is suited to virtually all agricultural crops, as well as residential and commercial landscape systems. It is also suited to steep slopes where other methods would cause excessive erosion, and areas where other application devices interfere with cultural operations.

Local water test results should be obtained and used to determine irrigation suitability and plan for potential treatment needs.

The movement of dissolved substances below the root zone may affect groundwater quality. As with all irrigation, there may be effects to downstream flows or aquifers, and the amount of water available for other water uses.

Operation and maintenance of a microirrigation system involves periodic inspections and the prompt repair or replacement of clogged or damaged components. Additionally, the operator will need to determine and control the volume, frequency and application rate of irrigation water in a planned, efficient manner.

Common Associated Practices

Irrigation System, Microirrigation (441) is commonly applied with conservation practices such as Water Well (642), Irrigation Reservoir (436), Pumping Plant (533) Irrigation Water Conveyance, Pipeline (430), and Irrigation Water Management (449).

For further information, contact your local NRCS field office.