

Microirrigation: Drip irrigation Components and Functions

Indiana NRCS Training Document—October 2022

Control Systems



Flow and Pressure Gauge

Control amount of water and pressure in different areas of system.



Backflow Preventer

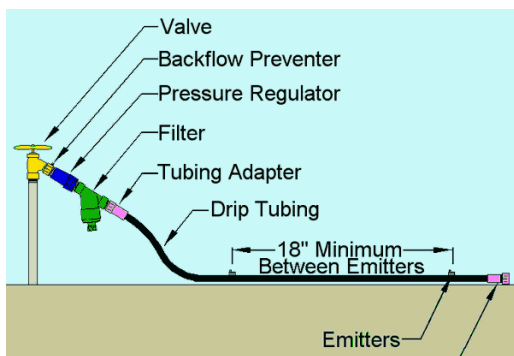
Prevents water in irrigation system from contaminating water source.



Control Valve

Controls water flow to different zones when systems are used to irrigate multiple areas.

Delivery Systems



Fittings, Pipe, and Tubing

Used throughout the irrigation system to move water from the pumps to the irrigation heads. PVC is generally used as a main-line delivery to fields, while tubing is used from mainlines to emitters. Fittings connect various sections together.



Flush & Vacuum Relief Valve

Used to clean out irrigation system and release trapped air in lines.



Pressure Regulators

Controls rate and pressure of water delivered.



Chemical Injections

Installed in irrigation lines for system clean out or providing nutrients in irrigation water.

Delivery Systems – continued



Filters

Installed at the beginning of the delivery line to filter out dirt or particles in water.

Control Systems– continued



Timers

Installed at the beginning of the delivery line to automate water delivery.

Emissions Systems



Drip Tape

Tube laid on or in ground, includes regularly spaced emitters that seep water along its length.



Barbs

Connect distribution tubing to drip tape (critical component).



Misters

Emitters that deliver a fine, continuous mist of water to plants.



Sprinklers and Sprinkler Jets

Emitters that jettison water to land in specific areas to send larger amounts of water at one time.

Small sprinkler heads that emit water in a circle around the root area of plants.