

FACT SHEET: Microirrigation

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Microirrigation conserves water in the landscape and easily connects to an outdoor spigot/hose bib. This system provides small amounts of water directly to the root zone of landscape plants. There are 4 types of microirrigation: micro-sprayers, micro-bubblers, drippers and drip tubing.



Micro-sprayers/sprinklers have interchangeable emitters that can produce up to 25 gph. This type sprayer is installed on a stake, wetting foliage and a larger surface area of 4-6 feet. It is easy to see if the sprayer is working properly.

Micro-bubblers are installed on short stakes, have solid spray or rays in 180 or 360 degree patterns, an adjustable flow up to 25 gph, are used to establish and maintain larger plants, and have less evaporation than micro-sprayers/sprinklers.

Drippers come in sizes from 0.5 to 24 gph, apply water directly to the soil resulting in minimal evaporation, attach to a distribution tube or spaghetti tubing and are used for widely spaced plants or containers.

Drip tubing contains factory installed emitters inside the tubing that are pressure compensating, with a flow rate of 0.9 gph per foot and has fewer parts/pieces than other types of microirrigation.

Maintenance on microirrigation systems includes checking plants for over- or under-watering, inspecting and cleaning filters, flushing out the main poly line at least once a year and making sure plants have adequate numbers of emitters for their root size. Adjust spray patterns as plants grow. A monthly walk through your landscape beds will allow you to make adjustments or repairs as needed that could be due to lawnmowers, weed eaters or garden critters such as armadillos leveling spray stakes.

The advantages of using a microirrigation system include:

- Water is applied in gallons per hour (gph) vs. gallons per minute (gpm) from an in-ground irrigation system
- Evaporation and erosion are decreased
- Design, installation and use are simple
- Products are interchangeable among vendors
- Used as “nurse system” for new plantings

The disadvantages of and solutions for using a microirrigation system include:

- Difficulty in detecting problems – don’t bury drip tubing under mulch
- Easy to over-irrigate -- use a timer!
- Emitter clogs if poor water quality – if clogged, soak emitter in vinegar/water solution
- Initial cost of set-up – attend a water-wise workshop (one time only) and receive a free microirrigation starter kit

If you have an in-ground irrigation system, you can retrofit that system to microirrigation for your landscape beds. Microirrigation cannot be used on turfgrass. Please refer to our Fact Sheet on Retrofitting an In-ground Irrigation System.