

IRRIGATION ZEROES IN

**RETROFIT SPRAY HEADS
TO PUT WATER ONLY
WHERE IT'S NEEDED.**

BY JAMIE J. GOOCH

THE DAYS of irrigating sidewalks and patios with misplaced spray heads are becoming a thing of the past. Irrigation professionals know they need to separate a client's property into manageable zones to provide the proper amount of water for different areas. But with water conservation becoming increasingly important, it's time to start thinking even smaller than zones — down to individual plants. That's where micro-irrigation, also known as drip irrigation, comes into play.

Spray heads and rotors allow Green Industry professionals to deliver water over a large area. They work great for monocultures such as lawns, but trees, shrubs and flowers all have different watering requirements than turf. Micro-irrigation uses different emitters to deliver different amounts of water to, say a hydrangea vs. a rose bush. It conserves water by being more precise and losing less water to evaporation.

According to the University of Florida Institute of Food and Agricultural Sciences Extension, micro-irrigation is exempt from some Florida communities' irrigation restrictions, and is being encouraged — and in some cases, even mandated — by several municipalities there. In addition to the



environmental benefits, saving water also equates to saving money, even more so if an installed irrigation system can be retrofitted with micro-irrigation.

Retrofitting considerations

The first rule of retrofitting an existing irrigation system with micro-irrigation is not to negatively affect the system's operation. A well-maintained system provides precise amounts of water to various zones due to a measured rate of water flow over time, which can be affected if drip emitters are installed. Micro-irrigation uses a smaller amount of water applied over a longer period of time. Therefore, it's easier to swap out an existing zone for micro-irrigation, rather than mixing spray and micro-irrigation in one zone.

Because the micro-irrigation systems operate at lower pressures than conventional spray systems, a means to regulate that pressure is required to prevent damag-

Drip emitters can be placed exactly where water is needed.

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As technology has grown by leaps and bounds, enabling us to summon water at the turn of a tap, it's easy to forget that wasn't always the case. It was once common to harvest rainwater, often using barrels under a downspout to collect and save water for later use. As homeowners become more aware of the importance of water conservation, interest in rainwater harvesting has received renewed interest.

Using gravity flow and a valve attached to the bottom of an elevated rain barrel, collected rainwater can be used to irrigate plants via drip tubing. Without electric-actuated valves, watering will not be uniform along the line. It's a manual process compared to a modern irrigation system — and may require some trial and error to set up. However, rain barrel installation is a service landscapers can market to homeowners who want to reduce their water bills and usage, but who don't want to invest in a full irrigation system.

ing the micro-irrigation system, according to UFIFAS' "Retrofitting a Traditional In-ground Sprinkler Irrigation System for Micro-irrigation of Landscape Plants" research paper. A new fitting on the old system should lead to an in-line pressure regulator to reduce the water pressure before sending the water along drip tubing to the plants in the zone. The length of the tubing and the number of emitters depends on the rate of flow.

The ease of retrofitting depends on the previous system. For example, according to Rain Bird Corp.'s "Landscape Drip Conversion Guide," its 1800 series spray body can accept a retrofit kit in the existing housing. The kit also provides 30-psi pressure regulation for a flow rate of 0.5 to 4 gallons per minute. A filter



Drip tubing allows landscapers to irrigate rows of beds where sprays are not a practical option.

can also be installed to protect downstream components. According to the company, retrofitting a spray zone for drip irrigation can result in water savings up to 60%. **L.M.**

Gooch is a freelance writer based in Northeast Ohio.

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