



A Beautiful Landscape on Less Water?

A water-stingy irrigation method may be your answer.

May is the peak of the spring dry season in Florida. This is troublesome for gardeners as plants are in a very active growth phase due to the warm weather but can quickly wither from the lack of rainfall. This paradox is solved by adding water to supplement the absence of rain. However, water is limited – we are on watering restrictions so now what?

If you answer “yes” to the following questions, there may be a solution for you below.

- Would you like to have landscape shrubs, flowers, and gardens that flourish even during the dry seasons?
- Do you want to do your part for conserving resources and reducing environmental impact?
- Do you want to comply with watering restrictions and still have a nice landscape?
- Do you not have time to hand water or do not want to drag water hoses around?
- Are you willing to use a water-saving technique developed and used in worldwide agriculture?

Conventional lawn watering sprays water over large areas wetting everything. This is good if the entire area is covered with similar plants such as grass. The common practice in many lawn sprinkler systems is to provide the fewest number of sprinkler zones to cut installation costs. However, research has shown that grass needs about twice as much water than mulched shrub beds, depending on variety, location, etc. One major step in reducing outdoor water waste is to group plants together with similar water needs and water them only as needed. The thirsty plants get more and the more drought tolerant plants get less water. This is called **hydrozoning**; grouping plants according to their water needs and watering them accordingly. This usually requires additional sprinkler zones, which increases the installation cost but makes a way to reduce water costs for the life of the landscape. Without hydrozoning, everything is watered to the satisfaction of the thirstiest plants. The other plants get over-watered which wastes water and invites diseases, fungus, and weeds. For more information on hydrozoning and lists of plants with like water needs see the *Florida Friendly Plant List* at <http://fyn.ifas.ufl.edu/materials/list.htm> or contact your county extension office.



Since hydrozoning allows the gardener to water non-grass areas of the landscape separately and sparingly, it is possible to water each plant or group of plants individually using a method called **micro-irrigation**, sometimes called drip or low volume irrigation. This method delivers a small amount of water at low pressure to the base of the plants leaving the open, mulched spaces between the plants dry. That is where the 10 to 25 percent water savings comes from in a well-managed micro-irrigated landscape – plants receive only the water they need. This has long been a standard practice in agriculture but is transforming landscaping to conserve dwindling drinking water supplies.

A brief explanation of micro-irrigation basics

- A source of clean (best if NOT from lakes or ponds) water is required such as a spigot on an outside wall. It is possible to connect to an existing automatic lawn sprinkler system.
- A low-pressure, flexible, black polyethylene tube, called the “distribution tubing” is routed from the water source through the area to be watered. It is on the surface but usually covered with mulch.
- A “water outlet” is “plugged into” the distribution tubing at each shrub, tree, or plant grouping. These water outlets can be generally classified into: **spray stakes** (roughly similar to a small lawn spray sprinkler on a stake about a foot tall); **micro-sprayers** (a smaller version of the spray stake about 5 inches tall); **drippers** (shaped like a tiny thread spool and works just as it sounds; it lets water out drip by drip) and **drip tubing** (combines drippers with the distribution tubing at the factory at about one-foot spacing, which eliminates the need to plug in the water outlets).
- The water outlets are selected and matched to the plant arrangement and sizes so that each plant receives only the water it needs during the time the water is turned on. A small plant, pot or hanging basket may have only one dripper, a larger plant several drippers or a micro-sprayer, while a group of shrubs may have a spray stake. Drip tubing is handy for long hedgerows or can be woven through plant beds and covered with mulch.

Micro-irrigation materials for landscape use are widely available in retail stores, home improvement centers, irrigation supply houses and online. In fact, the wide array of unusual products can become confusing so take time to learn the basics and save frustration, time, and money. Point of sale fliers can help and online sources are available. Your water management district has free information and your county extension service offers free micro-irrigation classes tailored to beginner and intermediate levels.

Advantages of micro-irrigation

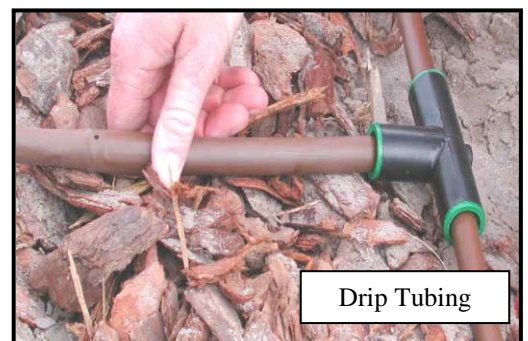
- Makes a little water go a long way
- Puts water only where it is needed, reduces evaporation, overspray and runoff
- Keeps foliage dryer than conventional irrigation for reduced disease, fungus



Spray Stake



Dripper



Drip Tubing

- Easy to install, expand and change
- Exempt from current day-of-the-week watering restrictions

Disadvantages of micro-irrigation

- Requires thoughtful layout using many available components
- Good management is necessary to monitor scheduling
- Frequent maintenance necessary to check for clogged emitters, leaks. **Note:** Including a water filter and a pressure reducer at the water supply connection will greatly reduce problems clogging and tubing blowouts.
- Subject to damage (often hidden) from animals, yard tools

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