



## Let It Flow

Conserving water with purposeful irrigation  
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Many Americans take for granted the fact that we have running water for the home and garden. However, globally speaking, fresh water is a very limited resource that we need to conserve. Constantly moving in the hydrological cycle from ocean to sky to earth, the amount of water we have is the same amount we had millions of years ago. However, how much water we have in any given place changes due to usage and the amount of rainfall. The hydrologic cycle, powered by solar energy and gravity, governs our water supply. This natural cycle moves water via evaporation/transpiration from the earth, condensation, transportation by air currents and then finally, precipitation back to the earth. Only 3 percent of the earth's 70 percent of water is fresh and of that 3 percent, only .02 percent is available to us for drinking. YIKES! That's a very low percentage, considering how populated the





world is. Throw in a severe drought and I'm getting a loud wake up call! One way we can do our part to conserve potable, or drinkable, water is through some best irrigation practices for your particular lawn and garden.

Rainwater harvesting is a simple way of recycling to water shrubs and plants. Lacking minerals, soft, pure rainwater is also healthier for your plants and collecting it off your rooftop saves a household tens of thousands of gallons per year. According to research by the Northwest Florida Water Management District, a roof about 1800 square feet can collect 750 gallons of water for each inch of rain. Not bad for a basic idea that has been around for a couple of thousand years.

Another old water-catching feature for your garden is the rain chain. Centuries ago, the Japanese began collecting rainwater from the roof with rain chains, or Kusari Doi. Before running water was available, collecting fresh rainwater was an easy solution to the daily backbreaking labor of toting water from a well or nearby stream for household chores. Also, look to traditional Japanese tea gardens for the beauty of water catching. These artful copper chains have stood the test of time, functioning like a downspout of the gutter while simultaneously delighting both the visual and hearing senses as the water



cascades from one tulip shaped funnel to the next, spilling into a basin. Use the water for potted plants and the rain chains are patio accents. These can be purchased through home and garden catalogs and websites.

The automated sprinkler system is a modern day convenience we have grown to depend on and love. With conservation in mind, the technology of water management utilities is working with commercial and residential irrigation through the implementation of both gray water and reclaimed usage in many communities. Greywater is the untreated household wastewater expended from showers, bathroom sinks, and washing machines. To collect and use greywater for landscape irrigation requires a permit from the health department and the installation of a “performance based treatment system”. The health department is very particular about inspections and permits given.

More prevalent in Florida is the use of reclaimed water, which is 100 percent treated wastewater. Reclaimed water is used to irrigate golf courses, commercial, and residential landscape. The new wastewater treatment plant scheduled to open in north Pensacola in September 2009 is a reclamation facility, which will have the reuse lines installed for future residential use. Steve Wood with the ECUA at the Bayou Marcus plant is enthusiastic about the new



facility. Although there are no local statutes in place now requiring the use of reclaimed water for residential irrigation, Wood touts the ECUA is ready when the time comes. In some south Florida areas, all new residential developments are required to use reclaimed water. And if all of Florida were irrigating with reused water, we could save billions of gallons of water.

In the meantime, we Pensacolians can be purposeful in our irrigation practices by choosing what is appropriate for our yards. Localized irrigation, a method using a low- pressure system, pumps water through pipes directly to the root zone of the plants. Various methods of this technique include drip, micro-sprinkler, and bubbler irrigation.

Use the drip system to water any non-turf area, such as vegetable gardens, flowerbeds, hanging baskets, street medians, and ground covers. Evaporation and runoff are at a minimum, making it the most water efficient of all methods.

Visit the Manna Food Pantries' organic farm and observe drip irrigation working. Bob Dance, head of the farm, laid perforated pipes in seven zones on top of his twenty-one rows of vegetables. Then he set a timer to irrigate the large garden three times a day for short intervals, totaling one- half inch per day in the summer and one-quarter inch in the winter. With the pipes running along the



rows, the water was absorbed immediately, leaving little to no waste. Also, a rain sensor was attached to the system, preventing scheduled irrigation when it has rained a significant amount. Pleased with the efficiency of the drip system, Dance has since installed it in his flowerbeds and berms at his residence.

While drip or micro- sprinkling is ideal for residential flowerbeds, vegetable gardens, and berms, large lawns require the high-pressured sprinkler systems. This is where better practices can be beneficial in several ways. North Florida lawns require one-half to three-quarters inch of water. According to L.E. Trenholm in her article, “Let Your Lawn Tell You When to Water”, (Univ. of Florida IFAS Extension) over-watering is a common mistake, causing increased disease, weed, insect infestation, and other lawn problems. Two ways to prevent over watering are to calibrate your sprinkler to provide one-half of an inch of water and to install a rain sensor. Florida is the only state that has a statute mandating the attachment of rain sensors on all sprinkler systems installed after 1991. Both practices conserve our potable water and encourage healthier lawns.

For the do-it-yourself folks, installing sprinkler systems have never been easier. Rainbird and Orbit are just a couple of businesses that offer step-by-step brochures and websites for installing systems yourself. Building supply stores,



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such as Lowes and Home Depot, have everything you need. For those of us who consider the project too daunting there are several sprinkler companies in town that would love our business. Your yard won't be the only thing greening up this spring as you go environmentally green saving drinking water and dollars through purposeful irrigation practices.

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