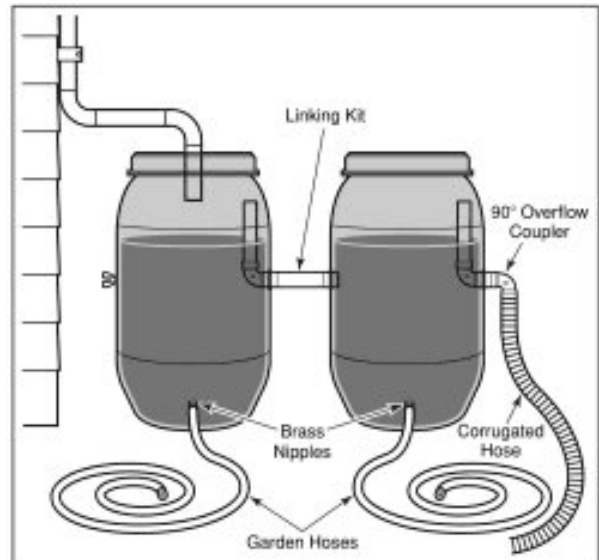


Thoughtful Irrigation Watering Systems

Although New England is blessed with fairly abundant rainfall scattered throughout the growing season, occasionally a long dry spell requires that we bring aid and comfort to our parched plants. Unfortunately this same dry spell is also drawing down the water sources from which our public water supply comes. Thoughtful watering choices will reduce the demand on the already stressed watershed.

Irrigation Methods. While the goal is to minimize watering altogether, there are many, many choices for watering when the time comes. Here are suggestions for choosing, and managing, the right system.



1. **Rain Barrels.** They are great for collecting rain and runoff from your home's downspouts, providing naturally soft water loved by plants. You can place the barrel under the down spout as shown in the figure or you can use an automatic diverter to direct the rain back into the downspout once the barrel is full.

During a rain storm, an enormous quantity of water runs off a roof: Each 4' x 8' section of roof that receives $\frac{1}{4}$ " of rain will fill a 55 gallon barrel, so chaining them together can store a large quantity of water for use in the dry season. Faucets on the barrels make it easy to fill up watering cans or to attach a hose. Watch for the Lincoln Water Department's annual spring rain barrel sale.

2. **Drip irrigation and soaker hoses.** Unfortunately, much of the water dispersed through sprinklers and hoses by enthusiastic gardeners evaporates before it ever reaches the roots. Use of drip irrigation or soaker hoses for shrubs and gardens can reduce water use by 30%-70%. These systems also keep the leaves dry, which minimizes the chance of mildew and other diseases that need a damp environment to grow.

A soaker hose is a canvas or rubber hose with perforations attached to an outdoor faucet or rain barrel. You can coil the hose around the plants in the spring, cover it with mulch, and leave it in place all season. Drip irrigation systems are more complex, requiring a system of hoses, emitters, filter and flow and backflow regulators. To these basics you can add timers and special routing systems to water different zones at different times. It is this versatility that makes a drip system more expensive. But they deliver water more precisely.

Soaker hoses and drip hoses have similar durability. If you run them under mulch to keep them out of the sunlight, they will last several seasons. Drip systems, however, are easier to repair if damaged. If an animal chews a hole through an emitter tube, the tube can simply be detached and replaced. If the animal chews through a soaker hose, the damaged part of the hose must be cut out and the remaining two pieces of the hose joined with a splice. The length of the hose is shortened, and the spliced area will no longer seep.

Automatic Irrigation Systems. Many people find automatic irrigation systems convenient. But households with irrigation systems often use a lot of water, sometimes four to five times more water than those without automatic systems! This is not only expensive but wasteful and less healthy for plants.

1. If you have an automatic irrigation system, make sure the timer is set to water each landscape zone efficiently. Better still, install a conservation controller and soil moisture sensor that turns the system off if the soil is moist. Rebates for smart controllers and sensors are available from the Lincoln Water Department. Find the information at link number one below.
2. If you have an automatic lawn sprinkler system, also make sure the sprinklers fit your lawn size and configuration and have good quality sprinkler heads. You should check them frequently for proper direction and spray pattern. Also monitor the system looking for soggy areas that indicate a leak. Leaky sprinkler systems often cause breathtakingly high water bills.

Additional Resources for watering information:

1. Greening Lincoln:
<http://greeninglincoln.org/water-department-announces-2-new-rebates/>
2. Concord Water & Sewer: (Note: The free offer on this site is for Concord residents only)
http://www.concordnet.org/pages/ConcordMA_Water/Saving%20Water%20Outdoors
3. Mass Water Resources Authority:
<http://www.mwra.com/comsupport/conservation/gardeningtips.htm#waterlawn>
4. <http://www.uri.edu/ce/healthylandscapes/tips/4.html>

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