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**NUMBERS TO REMEMBER**



*Prepared by the  
 City of Raleigh/  
 Public Affairs/  
 Department  
 Voice 890-3100/  
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### Tips for Installing and Maintaining Drought-Resistant Gardens

In the early 1980s, the concept of drought-resistant landscaping caught on throughout the country as water conservation became a national priority. Drought-resistant landscaping is most popular in the Southwest. It produces quality landscapes that conserve water and protect the environment without sacrificing the aesthetic benefits of traditional yard plants.

Drought-resistant landscaping does not mean cactus and rock gardens. It can be cool, green gardens full of beautiful plants which are maintained with water-efficient methods. The same green, Southern-style landscapes to which we are accustomed can be achieved and still conserve water.

### What Are the Benefits of Drought-Resistant Landscaping?

- **It saves water** - Studies in areas affected by long-term droughts have shown that in some cases, many residential landscapes are over-irrigated by as much as 20 to 40 percent.
- **It saves money** - Water conservation extends the long-term capacity of reservoirs and water-treatment facilities. Reducing peak demand means that municipalities can delay costly water-treatment facility expansions.
- **It saves your yard** - The most historic droughts in North Carolina history has brought an end to the watering of lawns.
- **It saves the environment** - A well-planned, established drought-resistant landscape uses little or no synthetic fertilizer or pesticide. This produces a more compatible environment for outdoor activities while also eliminating

polluting runoff from yards into streams and rivers.

### The Seven Steps To Producing a Drought-Resistant Landscape

#### 1. Plan ahead

Any landscaping effort should first start with a well-planned design. A landscape architect or designer can provide help with this phase, but for those who want to design their own, there are some publications that can help with this process.

**Very Low Water-Use Zones:** There are two types of very low water-use zones. Decks and paved areas require no water. These areas help provide recreational and living space in a practical setting. For paved areas, consider using permeable materials such as bricks or paving stones rather than concrete or asphalt to encourage rain to soak in rather than run off.

Protected areas where the exposure and shade conditions work together to inhibit evaporation also are very low water-use zones. In these areas, irrigation is needed only to establish new plants. Existing, well-established vegetation in these zones should be retained and new vegetation should be selected on the basis of minimal water use.

**Low Water-Use Zones:** These are somewhat exposed areas that must be watered to keep plants flourishing, but where water can be conserved by mulching and using an efficient low-volume irrigation system or by taking advantage of runoff from downspouts, driveways or patios.

**Moderate Water-Use Zones:** These are exposed areas with turf or plants with higher water requirements. This zone should be kept small and should be limited to focal points, such as entrance areas and functional areas, such as lawns.

## 2. Improve your soil

One of the main goals of drought-resistant landscaping is to encourage plants to develop deep root systems. Plants with deep roots continue to have access to moisture after surface soil has dried. Organic matter must be added to make the soil porous. Also, it may be necessary to chemically improve the soil with nutrients and other materials. Heavy fertilization will not compensate for insufficient physical soil preparation.

Before planting or installing an irrigation system, take a soil sample to the North Carolina Department of Agriculture Soil Testing Laboratory (919-733-2656) and have the staff analyze what improvements may be needed. The test is free.

Once you know what the soil needs, till the soil to a depth of about six inches and incorporate the topsoil. Add about four inches of an organic matter such as shredded pine bark, lime and any needed nutrients.

## 3. Establish practical turf areas

Having a water-efficient yard does not mean giving up on grass. It does mean giving serious consideration to where grass is planted, the variety of grass you choose and how you maintain it.

Limit turf to areas where it provides functional benefits and plan those areas carefully. It should be consolidated into large, relatively flat areas. By minimizing perimeter, you reduce turf areas and you allow irrigation with less splash loss on adjacent non-turf areas.

Also, chose a water-conserving, warm-season turfgrass. These include centipedegrass, zoysiagrass and bermudagrass. Like any plant, turfgrass must become well-established before it can be expected to be drought tolerant.

## 4. Select appropriate plants

A grouping of drought-tolerant plants, once well established, might not need any irrigation at all through a normal summer. Adding a plant with high-water requirements to such a grouping, however, might negate the group's water conserving benefits.

Many trees, shrubs and groundcover require little or no irrigation once they are established. Crepe Myrtles, Chinese and Japanese hollies are extremely drought tolerant.

## 5. Mulch, mulch, mulch

A two- to four-inch blanket of mulch will help conserve water by retaining soil moisture. But mulch also helps by retarding evaporation and protecting plant roots from overheated soil. It also prevents erosion and organic natural mulches decompose to improve soil texture and drainage.

## 6. Irrigate efficiently

No irrigation is allowed presently. When this historic drought ends and the irrigation prohibitions are lifted,

remember that regardless of the kind of irrigation equipment you choose, you can increase the efficiency of your system by using an appropriate type of irrigation for the area being watered by using some objective means of calculating how long you actually need to water and, if you don't have an automatic system, by using a timer.

## 7. Maintain your landscape

Proper watering, weeding and pruning, mowing and limited fertilization and pest control will keep your landscape healthy and beautiful. Follow the tips in this guide and you will be able to maintain a green, healthy landscape that is water efficient and drought-resistant.

*(Because of Stage 2 water restrictions, required plantings will be placed on hold throughout the City of Raleigh pending the lifting of Stage 2 water restrictions. Developers not using reuse water will need to complete a contract prior to issuance of landscape permits. This contract is available on the City of Raleigh web site at [www.raleighnc.gov](http://www.raleighnc.gov) under the Development Services link. If you have additional questions, please call 516-2495)*

### Stage 2 Water Conservation Measures:

- Prohibit the use of public water for irrigation;
- Prohibit filling new swimming or wading pools. Water may only be added to maintain sanitary operating conditions;
- Prohibit washing vehicles at any location, except at car-washing facilities that have been certified by the City;
- Prohibit washing of areas such as sidewalks, patios, decks, driveways, parking lots, streets and exterior building surfaces, except for soiled areas for the maintenance of public health and sanitary conditions;
- Leaking water services or plumbing will be interrupted immediately upon notification to the City of Raleigh Public Utilities Department. Water service will be restored when repairs are completed;
- Prohibit the serving of drinking water in restaurants, except upon request;
- Prohibit all non-essential use of water for commercial or public use;
- Buildings with water-cooled air conditioners or heating equipment that do not recycle City-supplied water must adjust thermostats to the highest or lowest setting available, respectively, except when the occupant's health and safety are adversely affected;
- Require innkeepers to ask guests spending more than one night to use their towels and bed linens more than once between laundering; and,
- Direct commercial and industrial customers to review water uses and implement industry specific best management water conservation practices.