WATER WISE

LANDSCAPING & WATERING GUIDE

WATER USE IT WISELY®

wateruseitwisely.com

SAVING WATER IS EASY WHEN YOU THINK ABOUT IT

Did you know?

- During dry periods, landscape watering can use up to three-quarters of total household water usage.
- Many plant problems arise not from underwatering, but from overwatering.
- An inefficient sprinkler can deliver as much as 300 gallons an hour onto a lawn. That's no drop in the bucket!

Watering efficiently is one of the best and easiest ways to save water—and money. Besides conserving water, proper watering will also keep your landscape plants healthy and beautiful throughout the year. A water-wise landscape doesn't mean giving up your lawn or making dramatic changes to your landscape or lifestyle. There are many simple ways to save water, and they all start with you. This booklet will show you how.

WATER WISE LANDSCAPING IS ANYTHING BUT DRY

Xeriscape, a set of principles for water-wise landscaping, combines the Greek word *xeros*, meaning *dry*, with the word landscape.

Although the word translates as *dry-scape*, Xeriscape is really about planning and maintaining your landscape and watering efficiently. This sensible approach allows you to conserve water while enjoying an attractive yard. The water-wise landscape principles described in this booklet are based on the original seven principles of Xeriscape:

1. Planning and Design	pg. 3-6
2. Soil Improvement	pg. 7-8
3. Practical Turf Areas	pg. 9-10
4. Efficient Irrigation	pg. 11-16
5. Mulch	pg. 17
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7. Appropriate Maintenance	pg. 21-22

Read on to learn more about each of these key principles of water-wise landscaping.

WATER-WISE PRINCIPLE 1: PLANNING & DESIGN

Whether you're developing a new landscape, renovating an existing one, or just looking for ways to conserve water in an urban environment, proper planning and design are essential to creating a site that is water-wise. Most people want to skip right ahead to the planting, but it's better to look at the big picture first. How will you use your landscape? How will your landscape use water? This section will help you answer those questions and make a plan.

MAP IT OUT

Tools You'll Need

- Pencil
- Pen
- Graph Paper
- Tracing Paper
- Ruler
- Masking Tape

1. Identify Permanent Features

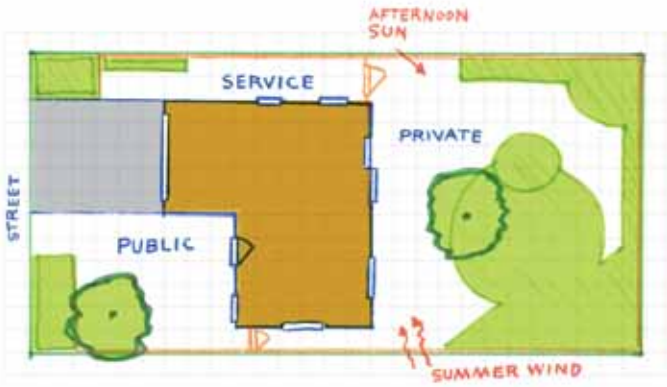
On a piece of graph paper, draw to approximate scale any permanent features of your property, including the location of your house, other buildings, large rocks, slopes, and existing trees or vegetation you plan to keep.

2. Identify Characteristics

Next, tape tracing paper over your base plan and sketch different qualities and characteristics of your property, including sun exposure, existing shade, direction of summer breezes, slopes, and street noise. You can also identify soil types on your property and any drainage problems that need to be corrected or considered. If you'd like to harvest rainwater, identify spots where rainwater falls or flows from your roof to the ground.

3. Identify Use Areas

Tape on another piece of tracing paper and identify use areas. You'll want to identify three different areas: public, private, and service. Public areas are the highly visible areas that typically receive the most care (and the most water). Private areas (usually the backyard) are where the family plays the most. It should be functional in design and receive less water than the public areas. Service areas, such as the sides of the house, garage, or driveways, are least visible and should require the least care and watering.



After sketching your permanent features, identify the primary use areas.

SHADE IS VERY COOL

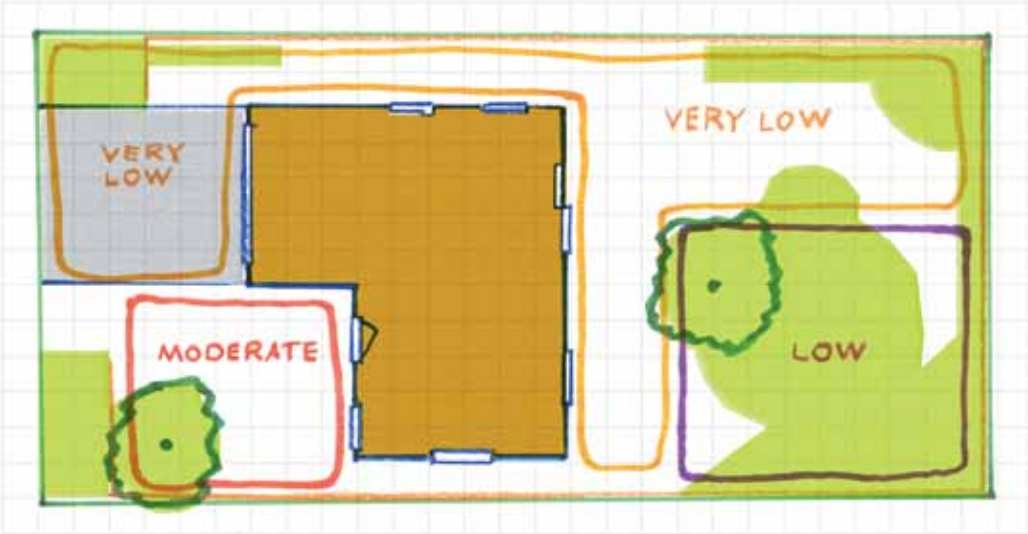
There's definitely a bright side to shade, so make sure you plan plenty of shade for your landscape. Shade cast by trees or structures can cool the landscape by as much as 20 degrees, reducing heat buildup and water evaporation from the soil. A mature oak can dissipate as much heat as four central air conditioners running 24 hours per day! Shade also reduces heat buildup from hard surfaces, such as driveways, walks, and walls, so plan to shade these areas with trees and large shrubs whenever possible. Trellises, arbors, walls, or fences can provide shade or scatter light.

ZOOM IN ON YOUR WATERING ZONES

The next step in planning your landscape is to identify the microclimates in your yard. Moisture, sun, shade, wind, and heat—as well as the physical characteristics of your landscape—create different zones that require different amounts of water. Once you have identified these microclimates, you can plant "with nature" by selecting plants that can survive and thrive within these zones without much watering. Ready? Tape another sheet of tracing paper over your base plan and sketch your water-use zones.

Very Low Water-Use Zones

There are two kinds of Very Low Water-Use Zones. There are zones that don't need any watering, such as driveways, decks, patios, rock gardens, or pathways, and there are naturally wet zones—protected areas where exposure, shade, and contour work together to inhibit evaporation. In these areas, irrigation is only necessary to establish new plantings. Since Very Low Water-Use Zones offer the greatest potential for water



Sketching your water-use zones will help you select the right plants for each area.

savings, you'll want to keep any well-established plants in these areas. Shaded areas not only reduce water demand, they lower indoor temperatures and reduce summer cooling costs.

Low water-use plants, mulch, and drip irrigation combine to create an effective low water-use zone.

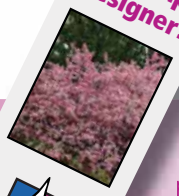
Low Water-Use Zones

Low Water-Use Zones are somewhat exposed areas that need some watering, but take advantage of runoff from downspouts, patios, and driveways for most of their water. Using low-volume irrigation systems and effective mulching over the soil and plant roots can often turn a Moderate Water-Use Zone into a Low Water-Use Zone.

Moderate Water-Use Zones

Moderate Water-Use Zones are sunlit areas with grass or plants that require more water. In your landscape plan, keep these zones small and limited to only highly visible or functional areas, such as front entrances or recreational lawns.

Should You Hire A Landscape Designer?



An experienced professional can help you a great deal to plan and implement a water-wise landscape. You may want to hire one simply to help establish a master plan that you can execute yourself. If you're a true do-it-yourselfer, check out the Additional Resources section on the back cover of this booklet for resources that can give you a more detailed strategy for making your yard water-wise.

PLANT SELECTION

Right Plant, Right Place

Once you've planned out your landscape, you can start picking the best plants for each of your zones. Tape another sheet of tracing paper over your base plan and add your plants, considering site characteristics, use areas, water-use zones, and shade needs.

Many of the native plants that thrive on the East Coast are already water-wise. They've adapted to hot, humid weather as well as hot, dry weather. There are dozens of species of beautiful and hearty plants to choose from. Just plant them in the right spot and give them room to get established. Contact your local water utility, cooperative extension, or similar agencies for information about suitable plants. Or flip to pages 18-20 of this booklet for suggestions.

Finalize Your Plan

Before you begin your landscaping, check with your local cooperative extension or nursery for plant selection. You'll want to know the answers to the following questions before buying:

1. Which of the shrubs or groundcovers you have chosen are shade-tolerant? Which require sun? Which are low water-use?
2. Compare colors and bloom cycles of the plants you have selected. Which bloom when? What colors are they?
3. Which plants have you selected to provide variety as well as visual harmony within their water-use zones?
4. Which kind of mulches will you need for the plants you have selected?
5. How much care will these new plants require?
6. Can you use shrubs, trees, or groundcovers that need little or no regular watering as an alternative to conventional cool-season grasses such as fescue?
7. Do you have the option to use zoysia, centipede, or Bermuda grass instead of fescue?

Put Like with Like

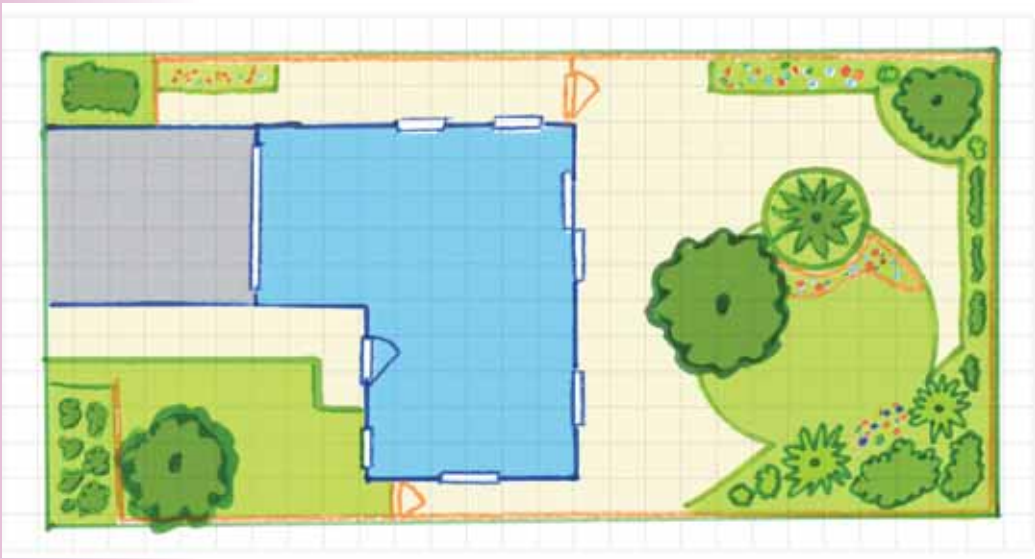
To reduce watering and maintenance, group plants with greater water needs together, and place them in a spot that is naturally moist, such as a low-lying area or at the bottom of a hill.

Low water-use plants should be used in dry spots, windy or exposed areas, and against sunny south or west walls of buildings. Keeping plants with similar needs together allows you to provide just enough water to keep them healthy. Whether you're irrigating by hand or using an automatic timer, grouping like with like can simplify your watering sequence.

Little Plants Are Big Winners

Most people like the idea of super-sizing their shrubs from the nursery. However, if you go smaller, you'll save big—not only on nursery costs, but also on water bills. A less expensive one-gallon plant can quickly catch up to a five-gallon plant.

In the final step of your plan, sketch in your trees, shrubs, groundcover, and turf areas.



PAY DIRT: IMPROVING YOUR SOIL ENCOURAGES WATER-WISE PLANTS

Carefully prepared plant beds can reduce water usage by almost half. That's because soil plays a huge part in a water-wise landscape. Good soil absorbs and holds moisture better and encourages plants to grow deep roots so they can access moisture even when topsoil is dry. Improving the soil now can help your plants become healthier and better suited to handle low-water conditions later.

What Is Good Soil?

Good soil has organic material that (1) holds water well, (2) provides nutrients, (3) is aerated to allow water to penetrate several inches to reach deep roots, and (4) has large particles that allow water flow and absorption. Dense soils such as clay are slow to absorb water, so they're prone to runoff.

Get Your Soil Tested

Healthy plants start with healthy soil. So, before planting or installing an irrigation system, make sure to test your soil. Your local cooperative extension can test your soil and tell you how to improve it. See the Additional Resources on the back cover for the extension in your area. When collecting samples, keep the following in mind:

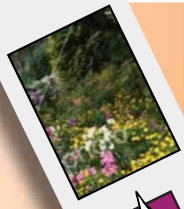
1. Remove a small amount of soil from a depth of about four inches at 10 scattered spots around the yard. Do the back and front yards separately.
2. In a clean plastic bucket (don't use galvanized steel), mix the soil gathered from the 10 spots together into a single soil sample.
3. Pack your soil into the soil sample box provided by the agency.
4. Repeat these steps for the backyard and mail out both samples for testing.

Typically, within a few weeks, the agency will reply with a letter explaining what your soil is missing and how to enhance it. Once you know what your soil needs, follow the steps on the next page to add the recommended improvements.

How to Improve Your Soil

1. Begin with deep spading, plowing, or rototilling—to a depth of about six inches—to break up compacted soil and allow root systems to grow deeper into the earth.
2. While tilling, add organic matter such as compost or shredded leaves to improve penetration, distribution, and retention of moisture.
3. Add soil amendments as recommended by a soil test.

Think Natural



Avoid chemical fertilizers with nitrogen and phosphorus that can wash into creeks, rivers, and lakes, causing plumes of harmful algae. If you must use chemical fertilizers, use them sparingly and never during or just before rainstorms. Avoid fertilizing sloped areas where the chemicals will be washed away by rain. Whenever possible, use natural organic material, such as compost, with natural levels of nutrients, and work it into the soil by tilling or "topping off" the soil.

WATER-WISE PRINCIPLE 3:

PRACTICAL TURF AREAS

CUT BACK YOUR GRASS

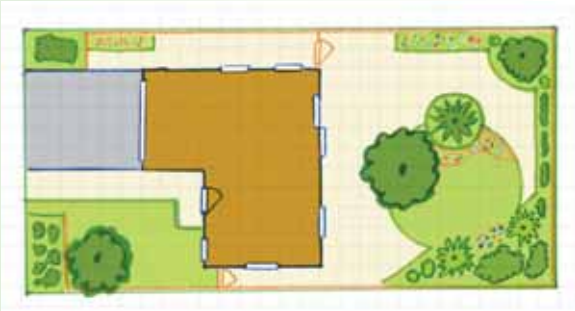
Lawns that stretch from property line to property line just don't make much sense these days. Besides requiring a lot of fertilizers, herbicides, and fungicides—chemicals that often end up in our streams, lakes and bays—large lawns with conventional spray irrigation waste one of our most precious resources: drinking water.

However, you don't have to give up your lawn. Instead of thinking of grass as the focal point of your yard, think of it as having a function: a play area, for example, or a visual frame for a larger natural setting. With good soil, the right grass selection, and the right maintenance, you can still have a beautiful lawn area that needs little or no watering once established. And remember that grass is naturally resilient. It protects itself by going dormant in very dry conditions and springing back when normal rainfall returns.

Start by giving up turf areas that don't get much use, such as those near foundations, along medians, or on steep slopes. Replace these turf areas with ground-cover, flower gardens, ornamental shrubs, and shade trees that are water-wise and drought-resistant. Be careful adding impervious surfaces, such as paved walkways and patios. They increase runoff and may cause drainage problems. In the end, your water-wise yard will look far more interesting than it ever did with plain old turf.

BEFORE

AFTER



SELECT A LOW WATER-USE TURF GRASS

Where you do have grass, consider a water-conserving, warm-season turf grass species, such as centipede, zoysia, or Bermuda. Of the three, Bermuda cultivars are by far the best at conserving water and are most drought-resistant. Ask your cooperative extension or garden center which cultivars are most appropriate for your lawn. Keep in mind that Bermuda grass will turn brown in the winter, so including shrubs, evergreen trees, and cool-season flowering plants will help enhance the appearance of your landscape year round.

By choosing a low water-use grass suited to your region, enhancing the soil, and mowing high, you can grow healthy grass with a strong root system that will:

- Survive dry and drought conditions when they occur.
- Resist disease, insects, and weeds on its own.
- Reduce or eliminate the need for chemical applications.
- Use less water and be easier to maintain.

WATER-WISE PRINCIPLE 4:

EFFICIENT IRRIGATION

GOING WITH THE FLOW: WATERING & CONSERVING

Just by following a few simple guidelines, water-wise gardeners can create hearty landscapes that can withstand hot, dry conditions.

PROS & CONS OF DIFFERENT IRRIGATION SYSTEMS

Sprinkler Systems

Sprinklers can cover large areas. Manual sprinklers require you to open the valve, time the watering yourself, and then shut off the flow. Automatic sprinkler systems offer the benefit of programmable controllers.

If you choose an automatic sprinkler system, make sure you set it correctly and adjust it as conditions change. Water early in the morning to reduce the evaporation rate. If water runs off your yard, split your watering times into two or more sessions. And be sure to turn off your system if you're getting enough water from rain showers.

Watch the Weather

A good way to prevent overwatering is to install rain or soil moisture sensors to override your automatic watering system when necessary.

A rain sensor simply senses rainfall. Once a designated amount of water has been detected, it shuts down any regularly scheduled irrigation. Rain sensors are small, simple devices and are generally less expensive and easier to install and maintain than soil moisture sensors.

Soil moisture sensors are more accurate than rain sensors because they can detect moisture at the level of the root system. They are more exact in measuring how much water your plants are receiving and thus offer greater water savings. However, they are somewhat complicated to install and manage.

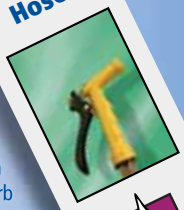
Drip Irrigation

This system is good for a small yard or for watering individual plants. Drip irrigation is highly effective at supplying one to four gallons of water per hour directly to the soil. The advantage of drip irrigation over sprinklers is that there is little water loss due to evaporation or runoff. It's particularly good for mulched areas because it can directly soak the soil without washing away the mulch.

Hand Watering

The simplest and most common irrigation system is a garden hose or a portable sprinkler. The advantage of hand watering is that you can easily avoid overwatering. Use a nozzle to control the flow. When water stops being absorbed into the ground, move to another location. Wait an hour, then plunge a long screwdriver or spade into the ground to check that the soil is moist to a depth of six to ten inches.

Nozzle That Hose!



Using a hose without a nozzle is an inefficient way to water. It delivers water much more quickly than the landscape can absorb it, causing runoff that wastes water and carries away precious topsoil. It's better to use a watering can for hand watering. Water each plant once, then repeat 15 minutes later after the water has soaked into the soil. If you must use a hose, make sure to attach a hose nozzle so water comes out in a spray and can easily be turned off when not in use.

WATERING BY THE NUMBERS

There are three steps to practical landscape watering:

1. Know how much water your plants need.
2. Know how much water each part of your watering system applies.
3. Match your watering system output to your plants' needs.

Follow these three steps to figure out the best watering plan for your two main plant types. On pages 13-14, we'll calculate your lawn watering needs, then we'll do the same for landscape plants on pages 15-16.

WATER-WISE LAWN WATERING

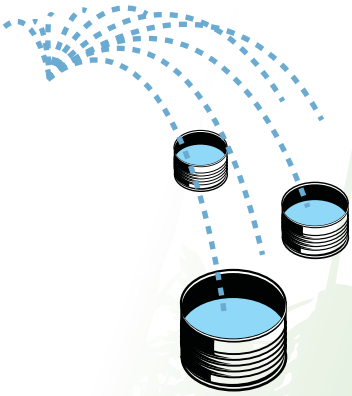
1. How Much Water Does Your Lawn Need?

For lawns, water deeply but infrequently to encourage deep roots. The key to watering your grass is to apply enough water to soak down to the depth of the roots. The amount varies with soil type, but a good guide is to apply no more than 1 inch of water every time, which is enough to soak the soil to between 6 and 10 inches.

2. Measure Your Sprinkler Output

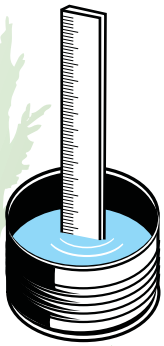
Without knowing it, you could easily drop up to 300 gallons of water in one hour and end up overwatering your lawn. Here's how to test your sprinkler output so you can adjust your watering time:

1. Place six to eight shallow, flat-bottomed cans at scattered locations around your lawn. Tuna or cat food cans work well.



2. Run your sprinklers for 15 minutes.

3. Use a ruler to measure the depth of water in each can. Add all the numbers, then divide by the number of cans to find the average output.



4. This average number is your sprinkler number. It is the average amount of water your sprinklers apply in 15 minutes.

3. How Long and How Often Should You Water?

After you've calculated your sprinkler number in the previous step, you can calculate how long to run your sprinklers. Simply locate your sprinkler number in the chart below, then find the corresponding watering time.

Sprinkler Run Time to Apply 1 Inch

Sprinkler Number	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Watering Time in Minutes	75	50	37	30	25	22	19	16	15

Now put your numbers to work. Set your sprinkler timer and water your lawn for the correct number of minutes. Wait one hour, then push a spade or long screwdriver into the ground to see if you've soaked the soil to the appropriate depth. It will slide easily through wet soil but will be difficult or impossible to push through dry soil.

By the way, if you run your sprinklers for the correct number of minutes but water pools or runs off your lawn, then you need to split your watering time into two or more sessions. Wait an hour for the water to soak in between sessions.

Now, how often should you water? Water only when your turf is stressed from lack of water. How can you tell? Step on it. If you leave distinct footprints or the grass doesn't spring back, it's time to water. So long as you're applying one inch of water (don't forget to include any rainfall) each time you water, then no more than once a week is typically enough to keep your lawn green throughout the summer.

WATER-WISE LANDSCAPE WATERING

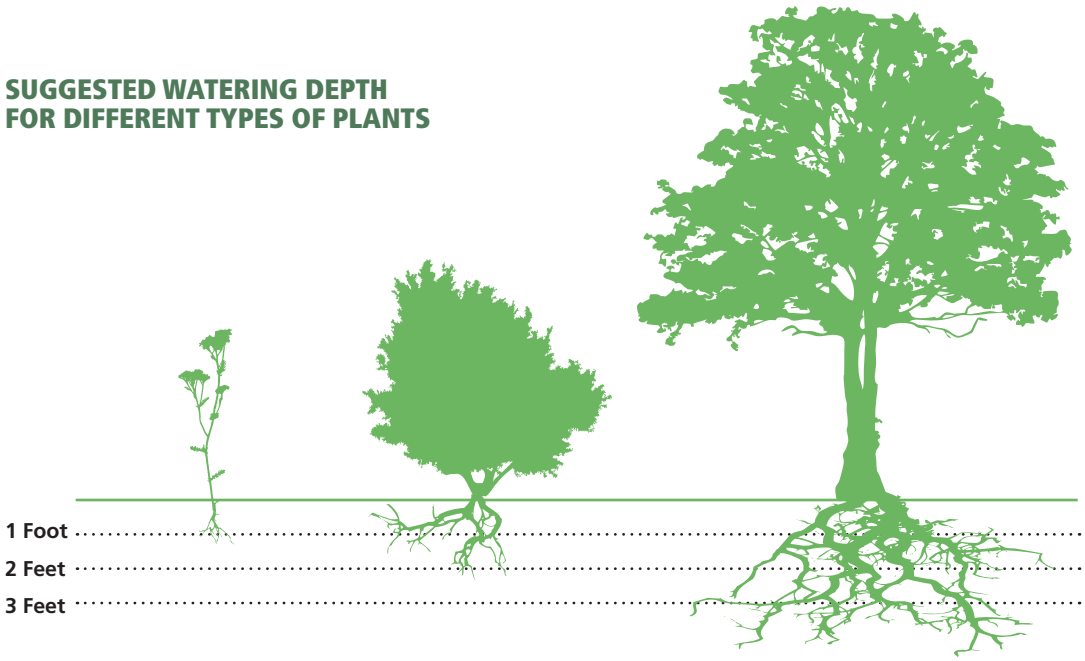
1. How Much Water Do Your Plants Need?

Just like grass, the most effective way to water your landscape plants is to water deeply but infrequently. Larger plants, like trees, need more water because they have deeper roots and larger root zones and can store more water. This also means they can be watered less frequently, but we'll get to that in a moment.

The **1-2-3 Rule** is an easy way to remember how deeply to water:

1 Foot is the correct depth for small plants, such as groundcovers and annuals.
2 Feet is the correct depth for shrubs.
3 Feet is good for large shrubs and trees.

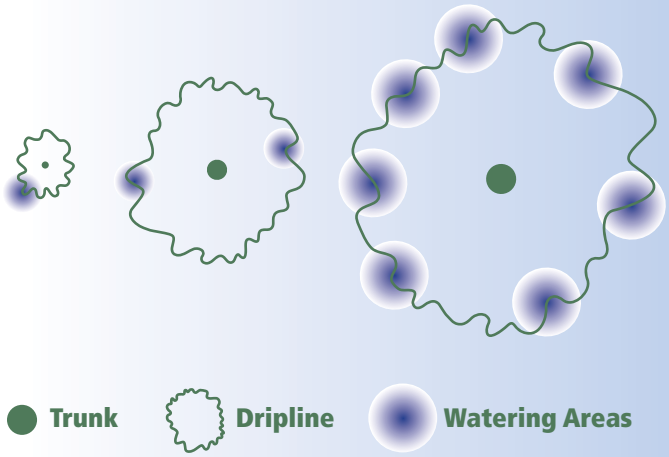
SUGGESTED WATERING DEPTH FOR DIFFERENT TYPES OF PLANTS



The following chart shows how much water is required to wet the root zone of different plants.

GALLONS OF WATER REQUIRED

	Plant Canopy Diameter in Feet												
	1	2	3	4	5	6	8	10	12	14	16	18	20
Tree	1.5	5	11	16	22	26	38	59	85	115	150	190	235
Shrub	1	4	8	12	17	20							
Small Plant/ Groundcover	0.5	2	3.5	5	7	9							



When watering trees and shrubs, don't water at the trunk or on the leaves. Neither carries water to the tree. Instead, water under the edge of the leaf canopy, which is called the dripline. That's where the roots are. If you use drip emitters, place several of them along the dripline. If you water by hand, contour your landscape so water collects under the dripline of your trees and large shrubs.

Aim for the Dripline

2. How Much Water Does Your System Apply?

Here are some typical output numbers for common plant watering systems. Notice the huge difference between the drip emitter, bubbler, and watering hose outputs.

Drip Emitter	1/2 – 4 gallons per *hour*
Bubbler	1/2 – 2 gallons per *minute*
Hose	2 – 5 gallons per *minute*

3. How Long and How Often Should I Water?

Refer to the chart to the left and write down the watering needs of all of your plants. If you use drip emitters, adjust the number and size of emitters on each plant so that your plants get the water they need in two to six hours. For example, the chart shows that a 10-foot tree needs 59 gallons of water. A good setup for this tree would be six 4-gallon per hour emitters, running for 2-1/2 hours (6 x 4 x 2.5 = 60 gallons).

Water only as frequently as your plants need it. Most plants only need water when they start to wilt. However, some plants look wilted during the day, but actually have plenty of water at their roots and will recover in the evening. If your plants are still wilting at night, they need water.

OTHER GREAT WATERING IDEAS

A rain barrel is a great way to harvest rainfall and runoff.

- Morning is the best time to water, because watering in the evening can invite fungus to grow on your plants at night.
- Put a rain gauge in your yard. If you get 3/4 to 1 inch of rain in a week, you can skip your next lawn watering.
- If you have an automatic sprinkler system, attach a rain sensor or moisture sensor shutoff device.
- Use a rain barrel to collect rainfall and runoff from downspouts. Use the rainwater to water container plants and gardens. Make sure your rain barrel has a good, well-fitted screen so it will not harbor mosquito larvae.

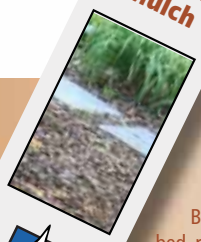
WATER-WISE PRINCIPLE 5: MULCH

MUCH ADO ABOUT MULCHING

Think of mulch as sun block for plant roots. Just two to four inches of mulch can substantially retain soil moisture, slow evaporation, and protect roots from overheating, which is especially helpful to ornamentals and vegetables. Hate weeding? Start mulching. Mulch can reduce or eliminate weeds that compete with landscape plants for moisture, nutrients, and sunlight.

Mulch can be organic or inorganic material. Organic mulches, such as pine straw, pine bark, and shredded hardwood, are the best choices because they retain moisture and add nutrients to the soil as they decompose.

How to Mulch



1. Before mulching a plant bed, remove all weeds. Do it early in the year before weeds get established. This will save you weeding time later.

2. Work a thin layer of mulch into the soil and then add two to four inches on top. Spread it out, and avoid making big mounds of mulch.

3. Mulch the entire root zone of the plant out to the dripline (leaf canopy).

4. When mulching around shrubs and small trees, make an earth basin and keep the mulch pulled back a few inches to prevent rotting the trunks. Shallow plants, such as azaleas, rhododendrons, and dogwoods, need the most mulching.

WATER-WISE PRINCIPLE 6:

LOW WATER-USE PLANTS

MEDIUM TO LARGE TREES

Bald Cypress	*Taxodium distichum*
Black Gum	*Nyssa sylvatica*
Bur Oak	*Quercus macrocarpa*
Common Hackberry	*Celtis occidentalis*
Ginkgo (male only)	*Ginkgo biloba*
Japanese Cryptomeria (evergreen)	*Cryptomeria japonica*
Loblolly Pine (evergreen)	*Pinus taeda*
Red Maple	*Acer rubrum*
Red or Green Ash	*Fraxinus pennsylvanica*
River Birch	*Betula nigra*
Sweet Gum	*Liquidambar styraciflua*
Thornless Honeylocust	*Gleditisia triacanthos inermis*
Tulip Tree	*Liriodendron tulipifera*
White Oak	*Quercus alba*
Yellowwood	*Cladrastis kentuckea*
Zelkova	*Zelkova serrata*

SMALL TREES

American Hophornbeam	*Ostrya virginiana*
American Hornbeam	*Carpinus caroliniana*
Chaste Tree	*Vitex agnus-castus*
Chinese Fringetree	*Chionanthus retusus*
Common Elder	*Sambucus canadensis*
Crabapple	*Malus (many species)*
Crape Myrtle	*Lagerstroemia indica*
Cypress	*Cypressa (many species)*
Eastern Redbud	*Cercis canadensis*
Eastern Red Cedar (evergreen)	*Juniperus virginiana*
Foster's Holly	*Ilex attenuata 'Fosteri'*
Ginkgo	*Gingko biloba*
Hedge Maple	*Acer campestre*
Highbush Blueberry	*Vaccinum corymbosum*
Japanese Flowering Cherry	*Prunus serrulata*
Juniper	*Juniperus communis*
Magnolia	*Magnolia (several species)*
Nellie Stevens Holly (evergreen)	*Ilex x Nellie Stevens*
Northern Bayberry	*Myrica pensylvanica*
Paw Paw	*Asimina triloba*
Persimmon	*Diospyros*
Sassafras	*Sassafras albidum*
Serviceberry	*Amelanchier arborea*
Shadblow Serviceberry	*Amelanchier canadensis*
Smoketree	*Cotinus coggygria*
Smooth Sumac	*Rhus glabra*
Southern Arrowwood	*Viburnum dentatum*
Staghorn Sumac	*Rhus typhina*
White Fringe Tree	*Chionanthus virginicus*
White Mulberry	*Morus alba*
Winterberry Holly	*Ilex verticillata*
Witch Hazel	*Hamamelis virginiana*

SHRUBS

Acuba	*Acuba japonica*
American Arborvitae	*Thuja occidentalis*
American Beautyberry	*Callicarpa americana*
American Boxwood	*Buxus sempervirons*
Barberry	*Berberris thunbergii*
Black Chokeberry	*Aronia melanocarpa*
Blackhaw Viburnum	*Viburnum prunifolium*
Chinese Holly	*Ilex cornuta*
Chokecherry	*Prunus virginiana*
Compact Oregon Grapeholly	*Mahonia aquifolium Compacta*
Deutzia	*Deutzia scaba; D. gracilis*
Eastern Arborvitae	*Thuja orientalis*
English Boxwood	*Buxus sempervirons 'Suffruticosa'*
Euonymus	*Euonymus japonica*
False Arborvitae	*Hiba arborvitae*
Firethorn	*Pyracantha (several species)*
Flowering Quince	*Chaenomeles japonica*
Forsythia	*Forsythia*
Fothergilla	*Forthergilla gardenii*
Glossy Abelia	*Abelia x grandiflora*
Hawthorne	*Rhaphiolepsis indica*
Heavenly Bamboo	*Nandina domestica*
Hummingbird Summersweet	*Clethra alnifolia*
Inkberry Holly	*Ilex glabra Shamrock*
Japanese Holly	*Ilex crenata*
Japanese Honeysuckle	*Lonicera japonica*
Juniper	*Juniperis (many species)*
Littleleaf Boxwood	*Buxus microphylla*
Mahonia	*Mahonia bealei; m. aquifolia*
Mountain Laurel	*Kalmia latifolia*
Pinxterbloom Azalea	*Rhododendron periclymenoides*
Possumhaw	*Ilex decidua*
Privet	*Ligustrum (several species)*
Red Chokeberry	*Aronia arbutifolia*
Scotch Broom	*Cytisus scoparius*
Southern Arrowwood	*Vibernum dentatum*
Southern Wax Myrtle	*Myrica cerifera*
Spirea	*Spirea (several species)*
Virginia Sweetspire	*Itea virginica*
Western Arborvitae	*Thuja plicata*
Winterberry	*Ilex verticillata*
Witch Hazel	*Hammelis virginiana*
Yucca	*Yucca (several species)*

VINES

Wintercreeper Euonymus	*Euonymus fortunei 'Coloratus'*

GROUNDCOVER

Bugle Weed	*Ajuga reptans*
Creeping Phlox	*Phlox stolonifera*
Foamflower	*Tiarella cordifolia*
Green and Gold	*Chrysogonum virginianum*
Leadwort	*Plumbago ceratostigma*
Lilyturf	*Liriope muscari; L. spicata*
Mondo Grass	*Ophipogon japonicum*
Sensitive Fern	*Onoclea sensibilis*
St. John's Wort	*Hypericum (several species)*
Woodland Phlox	*Phlox divaricata*

PERENNIALS & HERBS

Aster	*Aster novae-angliae; A. novae-belgii*
Black-eyed Susan	*Rudbeckia fulgida*
Blanket Flower	*Gaillarda x grandiflora*
Butterfly Bush	*Buddleia davidii*
Butterfly Weed	*Asclepias tuberosa*
Cotoneaster	*Cotoneaster (several species)*
Daylily	*Hemerocallis (many species)*
Gayfeather	*Liatris spicata*
Goldenrod	*Solidago rugosa*
Joe-Pye Weed	*Eupatorium fistulosum*
Lambs Ear	*Stachys byzantina*
Lantana	*Lantana (many species)*
Lavender	*Lavandula (many species)*
Lavender Cotton	*Santolina chamaecyparissus*
Mint	*Mentha (many species)*
Mistflower	*Eupatorium colestinum*
New York Ironweed	*Vernonia noveboracensis*
Oregano	*Origanum (many species)*
Parsley	*Petroselinum crispum*
Pinks	*Dianthus gratianapolitanus; D. deltoides*
Purple Coneflower	*Echinacea angustifolia*
Queen Anne's Lace	*Daucus carota*
Rosemary	*Rosmarinus officinalis*
Sage	*Salvia (many species)*
Stonecrop	*Sedum (many species)*
Swamp Milkweed	*Asclepias incarnata*
Thyme	*Thymus (many species)*
Tickseed	*Coreopsis (many species)*
Wild Bleeding Heart	*Dicentra eximia*
Wild Columbine	*Aquilegia canadensis*
Wild Geranium	*Geranium maculatum*
Yarrow	*Achillea millefolium*

NATIVE AND ORNAMENTAL GRASSES

Big Bluestem	*Andropogon gerardii*
Blue Fescue	*Festuca glauca*
Fountain Grass	*Pennisetum alopecuroides*
Indian Grass	*Sorghastrum nutans*
Little Bluestem	*Schizachyrium scoparium*
Maiden Grass	*Miscanthus sinensis*
Pampas Grass	*Cortaderia selloana*
Switch Grass	*Panicum virgatum*

WATER-WISE PRINCIPLE 7:

APPROPRIATE MAINTENANCE

KEEP YOUR LANDSCAPE GROWING STRONG

Now that you have an efficient, water-wise landscape, you can keep it growing strong by following a few simple guidelines each week.

Mow

During the summer, never cut more than one-third of the height of your grass. Not sure? Set your mower to its highest setting. Taller grass cools the soil, encourages deep roots, and reduces stress. If you mow your grass too short, root growth slows down, making the grass more susceptible to heat and drought. Also, leave grass clippings on the lawn to return nutrients to the earth and encourage growth.

Weed Control

Weeds are thieves. They steal nutrients and water from your grass and other plants. Keep weeds under control by weeding early in the year and consistently throughout the growing season.

Test Your Soil

Healthy soil has the proper balance of plant nutrients and pH. Contact your cooperative extension or nurseries in your area for soil testing services (see the Additional Resources section on the back cover). It can make a real difference in the health of your soil.

Fertilize

Adding a light top dressing of compost or organic fertilizer does wonders. It reduces thatch buildup on lawns, improves soil texture, and increases root mass and surface area. "Top dress" your lawn and plant areas early in the year when conditions are wet. Also see *How to Improve Your Soil* on page 8.

Prune

Avoid heavy pruning. Pruning stimulates growth, so plants require more water. Make sure you prune your trees and shrubs in the dormant (winter) season before the weather gets hot and dry.

ADDITIONAL RESOURCES

READ AND GROW

Want to go deeper? The following are good resources for learning more about creating and maintaining a water-wise landscape. Also visit wateruseitwisely.com for tips, games, and resources to help you conserve water.

Georgia Resources

Cooperative Extension
800-ASK-UGA1
www.caes.uga.edu

Metropolitan North Georgia Water Planning District
404-463-3256
www.northgeorgiawater.com

Georgia Environmental Protection Division
404-656-4713
www.conservewatergeorgia.net

Pollution Prevention Assistance Division
404-657-5208
www.gadnr.org/p2ad

Georgia Water Wise Council
www.gwwc.org

North Carolina Resources

Cooperative Extension
www.ces.ncsu.edu

NC WaterWise Partners

City of Durham
www.durhamnc.gov

Fayetteville PWC
www.faypwc.com

City of Greensboro
www.greensboro-nc.gov/water

Greenville Utilities
www.guc.com

City of High Point
www.high-point.net

OWASA
www.owasa.org

City of Raleigh
www.raleighnc.gov

City of Wilmington – Water Treatment Division
910-343-3690

Virginia Resources

Hampton Roads Planning District Commission
Hampton Roads Water Effciency Team
757-420-8300
www.hrwet.org
www.hrpdc.org

Cooperative Extension
www.ext.vt.edu

Washington DC Metropolitan Area Resources

Metropolitan Washington Council of Governments
www.mwcog.org

DC Water and Sewer Administration (DC WASA)
www.dcwasa.com

Loudon County Sanitation Authority (Leesburg, VA)
www.lcsa.org

Fairfax Water
www.fairfaxwater.org

Town of Leesburg, Department of Utilities
www.leesburgva.gov

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