



Water-Wise Gardening Guide

*Water...
every drop is precious!*





Watering Habits

A water-wise landscape can be beautiful and it can help you save water too. Do you want to be a wiser water miser? You don't have to pull out all your plants and start over. Lets begin by examining the way you water.

It may surprise you to learn that it is not necessary to water every day. In fact, watering 2-3 times per week may be enough. The key is to water deeply, allowing water to penetrate through the soil and reach plant roots.

Your Irrigation System

Turn on your sprinkler system and observe. Does it water your plants or the sidewalk? Does water flow into the gutter? If so, you are applying water faster than your soil can absorb it.

Turn on your drip irrigation system and observe. Are the emitters clogged? Is water flowing out of the pipe where your emitter should be? Check your emitters weekly, use a filter, and use a pressure regulator on your system.

Check Your Soil

For lawns—after watering, take a screwdriver and probe it into the soil. If you can push it 6 inches deep, you have watered enough. If you can't, set your timer to water longer . Then wait a few days and check it again. When the screwdriver can't go in as deep, it is time to water.

For trees and shrubs—after watering, the soil should be wet 2-3 feet deep. If you can easily dig with a shovel, you have watered enough. Trees and shrubs can go for weeks and sometimes months without adding water, if they are watered deeply enough.

How Should I Water?

Sprinkler irrigation may not provide enough water for established trees and shrubs. You can supplement by deep soaking with a garden hose on low for several hours. Check the soil several inches below the surface before you decide to water again.



Soil Types

What's My Soil Type?

No matter your soil type, plants use the same amount of water. Sandy soils absorb water quickly but also dry out quickly. Loamy soils absorb and hold water well. Soils composed mostly of clay absorb water slowly and stay wet longer. Compacted soils have trouble absorbing water.

Compost and Mulch

Before planting, always add a 3-4" layer of compost. Till it to a depth of several inches. After planting, mulch around your plants with a 2-3" layer of ground, shredded bark, decomposed granite, or even gravel. The purpose of mulch is to help the soil hold its moisture. Replace the mulch as needed.

Talk Lawn

Q: Should I remove my lawn?

A: A wisely watered lawn uses less water than an overwatered lawn. However, if you don't use your lawn for pets or physical activity, consider removing all or part of it and planting water-wise plants or installing permeable surfaces like gravel and paving stones.

Q: I'd like to have a small lawn, which variety should I choose?

A: Warm season grass like Bermuda needs the least amount of water. Cool season grasses like Kentucky bluegrass, perennial ryegrass and tall fescue need more water. All are good choices for our area. Most nurseries carry a "blend" of grasses which thrive in Modesto's climate.

Hard fescue is an alternative lawn and grows 4-6" tall. It does not need to be mowed but does not tolerate hot summers and may die back. However, hard fescue grows in shade and can be quite drought tolerant.

Did You Know?

Your lawn mower cutting height should be adjusted by season and grass type.

Warm Season - 1"

Cool Season - 2 1/2"

In most cases, mushrooms in the lawn indicate the breakdown of organic material. This process is not harmful to your lawn. Simply rake them out as they appear.

However, a circular pattern of mushrooms may indicate the presence of a fungus called a "fairy ring."

Aerate your soil and water properly to help reduce mushrooms.





Lawn Fertilizing

My Lawn Looks Brown Even Though I Water Deeply

In winter, warm season grasses go dormant. To green up a dormant, brown lawn, over seed it in late fall with an annual ryegrass

In summer, dying patches of lawn may indicate faulty sprinklers or a layer of thatch. Thatch is a buildup of living and dead plant materials blocking water from reaching the soil. If you water for 20 minutes and water does not penetrate the soil, there is most likely a thatch problem.

To reduce thatch, rent dethatch equipment from a nursery or garden center.

Fertilizing Lawn

If your lawn is green and healthy, there is no need to add fertilizer. If you choose to fertilize, the best time is in late fall. Fertilizing during warm temperatures may stress your lawn and/or add to the mowing frequency.



Water... every drop is precious!



Plant Zones

A plant “zone” is an area where plants are grouped together with similar watering requirements. Here are some suggested zones:

ZONE

1

Zone 1 Lawn & Container Plants need water most frequently. Check garden soil and plants in pots with a screwdriver, especially during summer.

ZONE

2

Zone 2 Fruit Trees, Vegetables, Roses and other water-thirsty plants not listed as “water-wise” should be watered deeply. Sprinkler irrigation is often not enough during summer and late fall. These plants do not tolerate dry soil.

ZONE

3

Zone 3 Water-Wise Plants need deep water, but less frequently. Newly established water-wise plants should be treated like a new plant until after their first year. However, pay special attention to new trees, which take longer to establish and often need water during their second year.

Set your watering system to water each zone differently. Experiment with time to see if plants are thriving. Try less water before you add more.

Should I Only Plant California Natives?

Not all California native plants are water-wise, in fact, some California natives need frequent water. The term “California Native” can be misleading. The best choice for Modesto landscapes is a mix of water-wise California native plants and water-wise Mediterranean plants. Look for plants or seeds marked Zone 9 or 10 at your local nursery to make sure they are suitable to our climate.

Did You Know?

During the warm months, 50% of your water bill may be from watering your landscape.

*Changing the **way** you water can help save money.*

More plants die from too much water than from not enough.

*Plants need **air** in the soil as much as they need water.*

***Mulch** can help conserve water by protecting the soil from drying out.*



California Poppy

Common & Botanical Name

Features of Interest

Height Width

Cool Season Annuals - Plant in fall & early winter

California Poppy (C) <i>Escholzia californica</i>	orange, red, yellow, cream colored flowers	8-18" 8-18"
Iceland Poppy <i>Papaver nudicale</i>	white, yellow, pink, purple, red, orange flowers	10"-3' 6-11"
Nasturtium <i>Tropaeolum majus</i>	orange, red, yellow flowers	1-2' 1-2'
Pansy <i>Viola species</i>	white, yellow, orange, purple, blue, bi-colored flowers	6-11" 4-5"
Stock <i>Matthiola incana</i>	pink, white, red, purple flowers	8"-3' 1'
Sweet William <i>Dianthus barbatus</i>	white, pink, purple, bi-colored flowers	1-2' 4-6"

Warm Season Annuals - Plant in spring & summer

Black-Eyed Susan <i>Rudbeckia hirta</i>	yellow, gold, red, bi-colored flowers	10"-3' 11-18"
Coreopsis <i>Coreopsis tinctoria</i>	yellow, brown, red, orange, bi-colored flowers	8"-2' 8"-2 1/2'
Cosmos <i>Cosmos species</i>	pink, white, red, yellow, orange flowers	1-7' 1-2'
Marigold (African) <i>Tagetes erecta</i>	yellow, red, orange flowers	18"-3' 1'
Zinnia <i>Zinnia elegans</i>	white, yellow, blue, pink, orange, pink, purple flowers	1-4' 1-4'

Plants for Modesto

Remarks

Fall annuals generally live from October-May, while spring annuals live from late March until November frost.

Plant in full sun in fall. Seedling plants often available in spring. Flowers early spring then dies back with summer heat. Usually returns the following year.

Plant in full sun. Plant seeds or seedlings in fall. Flowers late fall through spring.

Plant in partial shade. Plant seeds or seedlings in fall or spring. Flowers almost continually when replaced each fall or spring.

Plant in full sun or partial shade. Plant seeds or seedlings in fall. Flowers fall through spring.

Plant in full sun or partial shade. Plant seeds or seedlings in fall. Flowers fall through spring.

Plant in partial shade. Plant seeds or seedlings in fall or spring. Flowers in fall & spring.

Plant in full sun. Plant seeds or seedlings in spring. Flowers in summer. Native to Eastern U.S.

Plant in full sun. Plant from seed in spring or seedlings in spring or summer. Flowers in summer. Reseeds itself each year.

Plant in full sun. Plant from seed in spring or seedling in spring or summer. Flowers summer through frost. Has a tendency to reseed itself.

Plant in full sun. Plant from seed in spring or seedlings in spring or summer. Flowers early summer through frost.

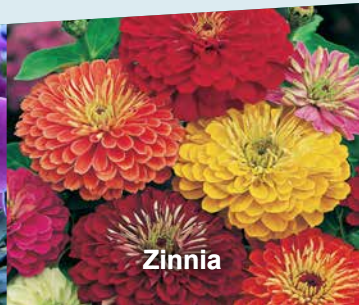
Plant in full sun. Plant from seed in spring or seedling in spring or summer. Flowers summer through fall.



Marigold



Pansy



Zinnia



Cosmos



Wisteria

Common & Botanical Name

Features of Interest

Height Width

Ground Covers - Plant year round

Bearberry (C)

Arctostaphylos uva-ursi

white, bell-shaped flowers

6-8"

8-18"

Mock Strawberry

Duchesnea indica

small yellow flowers, red fruit

3-4"

1'

Santa Barbara Daisy

Erigeron karvinskianus

small white, lavender or pink flowers

10-20"

2-3'

Ornamental Grasses - Plant year round

Deer Grass (C)

Muhlenbergia rigens

yellow, pink or purplish plumes

4'

4'

Pink Muhly Grass

Muhlenbergia capillaris

pink plumes

2-6'

1-5'

Giant Feather Grass

Stipa gigantea

yellow plumes

2-3'

3-4'

Vines - Plant year round

Carolina Jessamine

Gelsemium sempervirens

fragrant yellow flowers

20'

10-15'

Lilac Vine

Hardenbergia violacea

lilac, pink or white pea shaped flowers

9-10'

6-8'

Wisteria

Wisteria sinensis

fragrant white or purple flowers

20-30'

20-30'

Plants for Modesto

Remarks

Groundcovers are great for greening up large areas

Plant in full sun. Flowers late winter to early spring. Evergreen plant grows slowly. Mulch between plants to prevent weeds.

Plant in full sun, partial or full shade. Flowers in spring. Evergreen doesn't tolerate foot traffic. Aggressive if over-watered.

Plant in full sun or partial shade. Cut back perennial plant after flowering for quick re-bloom. Does not tolerate foot traffic. Keep contained or it can be aggressive.

Give all grasses a "haircut" in early spring

Plant in full sun or partial shade. Bright green grass forms clumps that get 2' taller when they "bloom." Goes dormant in winter.

Plant in full sun or partial shade. Dies back in winter.

Plant in full sun. Plumes add an additional 2-3' in height. Semi-evergreen, may go dormant in winter.

Vines need yearly pruning in spring, after March 30th

Plant in full sun or partial shade. Flowers spring through summer. Evergreen. Does not damage houses or fences.

Plant in partial shade. Flowers for just a few weeks during early spring. Evergreen.

Plant in full sun or partial shade. Flowers in spring. Goes dormant in winter. Wisteria grows quickly and should be trained it's first year and carefully pruned every year.



Santa Barbara Daisy



Pink Muhly Grass



Bearberry



Deer Grass



Blue Mist Spirea

Common & Botanical Name

Features of Interest

Height Width

Perennials & Herbs - Plant year round

Blue Mist Spirea Caryopteris x clandestina	blue flowers	2' 2'
Bergenia Bergenia crassifolia	pink flowers	2-3' 1'
California fuchsia(C) Zauschenaria californica	orange to red trumpet-shaped flowers	6"-4' 3-4'
Dusty Miller Senecio cineraria	powdery gray leaves, yellow flowers	2-3' 2-3'
Germander Teucrium chamaedrys	purple or blue flower spikes	6-11" 6-9"
Heuchera Hybrids	colorful flower spikes	1-3' 1-2'
Lamb's Ears Stachys byzantina	soft, silvery green leaves	1-2' 1-3'
Lavender Lavandula species	purple, pink, white flowers	1-2' 1-3'
Marjoram Origanum marjorana	tiny white or pink flowers	1-2' 1-2'
Rosemary Rosmarinus species	blue, purple, pink or white flowers	varies
Salvia Salvia species	red, purple, blue, pink, white flowers	varies
Penstemon Penstemon species	spiky flowers in many colors	2-4' 1-2'
Purple Coneflower Echinacea species	purple or white flowers	2-4' 1-3'

Plants for Modesto

Remarks

Prune after March 30th to avoid early frost damage

Plant in full sun. Flowers late summer through fall. Goes dormant in winter.

Plant in partial shade to full shade. Flowers in winter and spring. Evergreen.

Plant in full sun. Flowers summer through fall. Evergreen.

Plant in full sun. Flowers most of the year. Great border plant, shear back when it gets rangy. Evergreen.

Plant in full sun to partial shade. Flowers mid summer through early fall. Can be sheared into a nice hedge. Evergreen.

Plant in full sun or partial shade. Flowers mid-summer through frost, spikes can be cut off. Divide clumps when plant appears rangy. Evergreen.

Plant in full sun. Flowers in spring. Evergreen.

Plant in full sun. Flowers in spring. Creeps along ground like a ground cover. May go dormant in winter.

Plant in full sun. Flowers in spring. Evergreen. Can be used as a groundcover, small or large shrub.

Plant in partial sun to full shade. Flowers in spring. Great under oak trees. Evergreen.

Plant in full sun. Choose drought tolerant species like *S. apiana*, *S. clevelandii*, *S. officinalis*, *S. nemorosa*, *S. "Bee's Bliss"*. These species are also non-invasive, unlike some *Salvias* which shouldn't be planted near waterways or meadows. Goes dormant in winter.

Plant in full sun to partial shade. Flowers spring through fall. Short-lived (3-4 years). Evergreen.

Plant in full sun. Flowers spring through frost. Divide clumps after 3-4 years.
Native to central and eastern North America.



Dusty Miller

Purple Coneflower

Rosemary

Lamb's Ears

Bergenia 11



Euryops

Common & Botanical Name

Features of Interest

Height Width

Shrubs - Plant year round

Buckwheat (C)

Eriogonum species

pale flowers

5-6'

5-6'

Euryops

Euryops pectinatus

bright yellow daisy-like flowers

3-6'

3-6'

Indian Hawthorne

Raphiolepis indica

pink flowers, blue berries

4-5'

5-6'

Manzanita (C)

Arctostaphylos densiflorus, 'Howard McMinn'

whitish pink bell-shaped flowers

5-6'

6-7'

Nandina foliage

Nandina domestica

changes color in fall, red berries

3-6'

3-4'

Olive

Olea europaea, 'Little Ollie'

silvery green foliage

4-8'

4-8'

Oregon Grape

Mahonia aquifolium

blue-black fruit

5-6'

4-5'

Rockrose

Cistus species

white, pink or purple flowers

2-6'

4-8'

Spirea

Spirea vanhouttei

numerous tiny white flowers

5-6'

7-8'

Texas Ranger

Leucophyllum frutescens

silvery gray foliage, pink or white flowers

5-7'

5-7'

Valley Violet

Ceanothus maritimus

purple flowers

varies

Plants for Modesto

Remarks

Shrubs help define a landscape

Plant in full sun. Flowers in summer. Prune to retain shape. Attractive to bees and butterflies. Evergreen.

Plant in full sun. Flowers year-round. Remove dead flowers for longer bloom.
Prune for shape in early spring. Evergreen

Plant in full sun or partial shade. Flowers in fall and spring followed by berries. Evergreen.

Plant in full sun or partial shade. Flowers in spring. Prune for size and shape in early spring. Evergreen.

Plant in full sun or partial shade. Prune for size and shape in early spring. Semi-evergreen.

Plant in full sun. Has tiny flowers and should not bear much fruit. Evergreen.

Plant in partial shade. Flowers in spring followed by berries. In fall, foliage turns color. Evergreen.

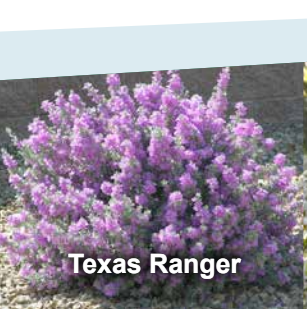
Plant in full sun Flowers spring through summer. Evergreen.

Plant in full sun or partial shade. Flowers mid to late spring. Loses leaves in fall. Prune after March 30th.

Plant in full sun. Flowers in spring and summer. Prune straggly plants for shape. Prune after March 30th.
Loses leaves in fall.

Plant in full sun or partial shade. Blooms in spring. Evergreen.

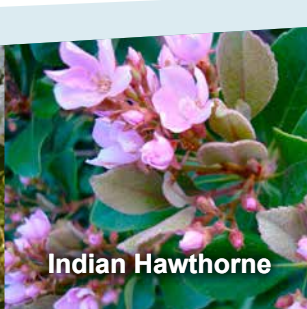
Lightly prune evergreen varieties in late spring and summer.



Texas Ranger



Spirea



Indian Hawthorne



Nandina



Rockrose



Crape Myrtle

Common & Botanical Name

Features of Interest

Height Width

Trees - Plant year round

Australian Tea Tree Leptospermum laevigatum	white, pink or red flowers	10-30' 10-30'
Australian Willow Gejera parviflora	willowy foliage, inconspicuous flowers	25-30' 15-20'
California Fan Palm (C) Washingtonia filifera	tall tree with attractive leaves	50-60' 15-20'
Chinese Pistache Pistacia chinensis	female trees have red berries that turn black	30-50' 30-50'
Crape Myrtle Lagerstroemia indica	pink, purple or white flowers	20-25' 20-25'
Desert Willow (C) Chilopsis linearis	pink, purple, rose, or white flowers	15-30' 10-20'
Holly Oak Quercus ilex	oval, 1 1/2" brownish gray acorns	30-60' 30-60'
Olive Tree Olea europaea	fruitless varieties best	25-30' 25-30'
Silver Dollar Eucalyptus Eucalyptus cinerea	interesting seed capsules	20-50' 20-40'
Strawberry Tree Arbutus unedo	attractive red fruit, dark brown bark 10-30'	10-30'
Sweet Bay Laurus nobilis	small yellow flower clusters, purple fruit	15-40' 15-40'
Western Redbud (C) Cercis occidentalis	sweet pea-like purple flowers	10-18' 10-18'

Plants for Modesto

Remarks

Plant trees in full sun. Prune to keep at desired height

Evergreen tree needs minimal pruning. Spring blooming flowers are “show-stopping.”

Evergreen tree grows slowly. Resembles weeping willow but has non-invasive roots.

Evergreen palm best used on large property. Trunk can reach up to 2’ in diameter.

Leaves turn color before dropping in fall. Slow to moderate grower. Has well-behaved roots.

Colorful blooms in spring and summer. Leaves turn color before dropping in fall. Choose varieties resistant to powdery mildew.

Flowers in spring. Willow-like in appearance. Grows quickly when young. Loses leaves in fall.

Evergreen tree has moderate growth rate. Makes an excellent lawn or street tree. Well-behaved roots.

Evergreen tree is drought tolerant. ‘Majestic Beauty’ bears almost no fruit. ‘Bonita’ does bear tiny fruit.

Evergreen tree grows quickly. Young foliage has round leaves, mature foliage is slender.

Evergreen tree has slow to moderate growth rate. Makes an excellent lawn tree.

Evergreen tree can be planted in partial shade or full sun. ‘Saratoga’ is an excellent cultivar.

Flowers in spring. Heart-shaped leaves are bluish-green. Usually grown as a multi-trunk tree. Loses leaves in fall.



Western Redbud



CA Fan Palm



Chinese Pistache



Desert Willow



Holly Oak



For more information on water-wise plants,
contact the City of Modesto
Water Conservation Program at: (209) 342-2246
or visit us online at:
www.modestogov.com/savewater

