WaterSmart Irrigation

Getting the Best Yard with the Least Water

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&

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Presentations & Handouts at
www.ecolandscape.org
How we can influence water use – Today!

• Plant selection, placement, and grouping in irrigation zones
• Efficient irrigation components
• Proper scheduling
• Inside presentations, break, & outside demonstration
Plant Selection, Placement, & Grouping

• Understand unique conditions of your site & desired functions of plants
• Then, select plants that fit both
• Plants unsuited to environment will struggle to survive
Assess Plants & Trees

• Determine which plants to keep & not to keep
• Remove plants that
  • You don’t like
  • Are high maintenance
  • Aren’t thriving
  • Not serving intended function
  • High water users
Assess Plants & Trees

• Keep plants that
  • You like & want to add other companions in your water-efficient landscape
  • Perform intended function
  • Low maintenance
  • Pest & disease resistant
  • Low & moderate water users
  • Drought tolerant
Mediterranean-type Climates

Cool, wet winters & warm, dry summers

What is a Hydrozone?

Grouping of plants

• With similar water needs
• In combination with similar seasonal moisture needs

Note: Consider “sun” requirements also!
Why Hydrozone?

• Target irrigation – Water where it’s needed

• Provide plants water when they need it (through managing/scheduling)

• Separate valves for zones based on plant water needs

• Reduce plant stress, non-beneficial growth, and risk of pest and disease problems
Hydrozone means the grouping of plants by their water requirements for efficient irrigation and plant health.
Hydrozones

Zone #1  High
Zone #2  Moderate
Zone #3  High
Zone #4  Low
Water needs of plants

How do I know

High
Moderate
Low
Very Low
Plant Search
American Canyon, CA
WUCOLS Region 1

Botanical name begins with: [ ]
Common name begins with: [ ]

Plant Type
- Ba Bamboo
- Bu Bulb
- G Grass
- Gc Groundcover
- P Perennial
- S Shrub
- Su Succulent
- T Tree
- V Vine

Water use
- Very Low
- Low
- Moderate
- High
- Unknown
- Not appropriate for this region

California Native

Go to WUCOLS list for all 6 regions
All plants for this region

Search Results
34 plants:
Type: Grass
Water use: Low

<table>
<thead>
<tr>
<th>Type</th>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Water Use</th>
<th>Flickr Photos</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>Aristida purpurea</td>
<td>purple three-awn</td>
<td>Low</td>
<td>See it</td>
</tr>
<tr>
<td>G</td>
<td>Arundinaria gigantea</td>
<td>cane reed</td>
<td>Low</td>
<td>See it</td>
</tr>
<tr>
<td>G</td>
<td>Bothriochloa barbinodis</td>
<td>cane bluestem</td>
<td>Low</td>
<td>See it</td>
</tr>
<tr>
<td>G</td>
<td>Bouteloua gracilis and cvs.</td>
<td>blue grama</td>
<td>Low</td>
<td>See it</td>
</tr>
</tbody>
</table>
Flickr Plant Search at WaterWonk.us
BeWaterSmart.info

WATER-WISE GARDENING IN THE GOLD COUNTRY REGION

Find Your Water Provider
Want to contact your water provider about great rebates and programs?

Water Saving Tips:
Water between sunset and sunrise when temperatures and wind are the lowest.
WaterSmart Plants for the Sacramento Region

This Plant List contains some of the most common very low, low and moderate water-use plants found in the Sacramento region.

This list is intended as a tool to participants in rebate and incentive programs for calculating the living plant coverage requirement (oftentimes a minimum of 50% plant coverage) for the converted area.

Refer to specific requirements for the rebate or incentive program for which you are an applicant to determine if you must use plants only from this list or if you can use plants from this list and plants that are not on this list.

Use of drought-tolerant, low-water-use plants, and California plant species native to this region is highly encouraged.

PLANT COVERAGE & SIZE

Plant Coverage Value
The Plant Coverage Value in square feet is for each plant at its mature width; it is the value that will be used by Program Administrators to determine the canopy coverage regardless of the size of the plant at the time of planting and/or inspection. NOTE: Tree canopy will not be used to determine the 50% plant coverage requirement for Placer County Water Agency’s Lawn Replacement Rebate Program.

WATER

Plant Water Requirements
Plant water requirements were obtained from WUCOLS IV, Water Use Classification of Landscape Species, Fourth Edition, CA Department of Water Resources, Regents of the University of California, California Center for Urban Horticulture, 2014, except where noted. Sacramento is in Region 2, the Central Valley.

Cultivars, with some exceptions, may not have been included in WUCOLS because it is presumed that

www.ecolandscape.org
Understanding Water-Use Categories & Definitions

High
Moderate
Low
Very Low
None
Low or Very Low No-water Use Plants*

• Adapted to Mediterranean-type climates
  • Growing cycles late fall through early spring

• Low water use – Little additional watering during summer months / may or may not be drought tolerant

• Very Low to No water use - Some established California natives
  • Rely on seasonal rainfall
  • No supplemental water in summer (except during periods of prolonged winter drought)

* Once Established – Reduced Summer Water
Defining “Established”

General rules of thumb:

- Two to three times size when planted
- In the garden two to three growing seasons
- Trees - 3 to 5 years

Note:
Until established, all plants need water - even plants that can survive on rainfall alone when mature, need regular moisture after planting
Low-Water Use & Drought-Tolerant – Not Equal

Drought tolerant - **Once established**, can survive on rainfall, infrequent watering, or withstand repeated dry periods and recover from repeated wilting.

Low water use – A **constant classification**, plants require low amounts of water no matter what.
Low Water-Use & Drought-Tolerant Characteristics

Stachys byzantina
Lamb’s Ear

Rosmarinus officinalis
Rosemary

Salvia apiana
California White Sage

Leaves - Retain moisture, reduce sun exposure, “hairs”, waxy surface, leathery, tiny, thick
Roots – Deep taproot, fibrous
Moderate Water-Use Plants

• Supplemental irrigation depending on season, location, rainfall, and adaptability

• Generally, water when top three inches of soil is dry to the touch

• Use soil probe to examine moisture in root zone
High Water-Use Plants

• Prefer regular moisture year round
• Frequent watering, generally two to three times a week, sometimes more during hot and dry conditions
  • Examples include: Lawns, plants from other regions, container plants
  • Soil moisture to remain consistently moist
Solar Needs
Plants for Hot Sun

• Require direct sun most of day
• Thrive under toughest conditions

Dasylirion wheeleri
Desert Spoon

Leucophyllum frutescens
Cenizo or Texas Ranger
Plants for Sun to Part Shade

- Tolerate sun all day or some shade part day

*Heteromeles arbutifolia*
Toyon, Christmas Berry

*Nepeta x faassennii* ‘Walker’s Low’
Hybrid Catmint
Plants for Dry Shade

• Full to dappled shade, some morning sun
• Useful under Oaks

*Carpenteria californica*
‘Elizabeth’
Bush Anemone
Invasive species

• Do not purchase
• Do not plant
• Remove and replace with appropriate plant

Mexican Feather Grass
*Stipa tenuissima*

Pampas Grass
*Cortaderia selloana*

www.ipc.org
www.plantright.org
Plant Spacing & Placing

• Plant **WIDTH** at maturity

  **Mature** plant **WIDTH** is the most important piece of information you need to know for **PLANT SPACING**

• Height at maturity

• **Tip:**

  Use a measuring tape
Why Spacing is Important?

- Flower or fruit production
- Maximum leaf surface (photosynthesis)
- Results in less
  - Maintenance & labor
  - Stress to plant
  - Pollution
  - WATER
- Natural form
Natural Form

Not This
Example Lawn Conversion
“Before”

Colleen Hamilton, Bloomin’ Landscape Designs
www. bloominlandscapedesigns.com

Landscapes by Rhodes
www.landscapesbyrhodes.com
Early April 2015
End of May 2015
Front Lawn Conversion
Plant Spacing

Regional Water Authority
Ultimate Water-Smart Garden Makeover
Day of Planting & After 7 Months
1-1/2 Years after Planting
Right Plant, Plant Well

- Hole no deeper than root ball & twice as wide
- Score sides of hole to rough up soil
- Check plant roots & loosen
- Root ball placed on undisturbed soil

Diagram available at www.ecolandscape.org
Right Plant, Plant Well

• Break up soil removed from hole (consistency in size)
• Fill hole with original soil
• Firm soil around roots
• Root crown slightly above grade
• Water well!

• To Stake or Not to Stake…
When to Stake Trees

- Stake tree only if necessary
- Protective staking (wind, vandalism, mower)
- Remove nursery/grow stakes
Staking Trees

- Two untreated poles 18” from trunk
- Flexible ties
- Cut stakes 2” above ties
- Check ties & stakes / remove as soon as tree can support itself (6 mo. to 1 yr.)
- Leave side & lower branches during establishment
- Top/crown of root ball approx. 1-1/2” above grade
- Cover soil with 3” mulch
- Keep mulch away from tree trunk
Establishing Plants for Drought Tolerance & Healthy Roots

• Newly installed plants must have water on root ball & native soil – encourages roots to extend into soil

• As tree/plant matures, extend intervals between watering

• Allow soil to dry-down (based on plant water needs)

• As matures, emitters moved, added/deleted, & moved out from trunk or base of plant
Mulch, Mulch, Mulch – What is it?
Generally defined: Any material spread evenly over the surface of soil to enhance the growth of plants and the appearance of the landscape.
Benefits of Mulch

In addition to saving time and money…

• Conserve water, reduce evaporation, retain soil moisture
• Moderate soil temperature for soil life and plant roots
• Protect irrigation system components
• Reduce weed growth (weeds compete with plants for nutrients & moisture)
• Reduce soil compaction, crusting (improving water infiltration), and erosion
Proper Mulch Application

Improper = “Mulch Volcanoes”

Proper = Wide
IF you have turf...

Minimum 2-foot wide “buffer zone” between lawn and impervious surfaces (sidewalk, street) = reduced runoff

A beautiful example of non-turf project...
Stock Ranch Nature Preserve

In your own back yard...

• 47 acres of open-space
• 1.5 miles of walking paths

• Located - Near Community Center, 7000 Auburn Blvd.
  (behind Costco) / Pedestrian bridge from Van Maren Park at Stock Ranch Rd.
Stock Ranch Nature Preserve

Recent Addition - Native & Drought Tolerant Garden

• Educational signage
Stock Ranch Nature Preserve

Native & Drought Tolerant Garden

- Observe plants in every season
- View mature sizes
Who can assist you?

Irrigation stores and manufacturers

• Irrigation Tutorials
  www.irrigationtutorials.com

• Green Acres Nursery & Supply
  www.idiggreenacres.com

• The Urban Farmer Store
  www.UrbanFarmer.com

• Hunter Industries
  www.HunterIndustries.com

• Rain Bird Corporation
  www.RainBird.com

• And others…
Who can assist you?

• EcoLandscapers & Green Gardeners  
  www.ecolandscape.org

• Landscape Designers  
  www.apldca.org

• CLCA Water Managers  
  www.CLCA.org

• Master Gardeners  
  http://camastergardeners.ucanr.edu

• Your water provider!
Free Resources

EcoLandscape.org

Beyond the Drought
A series of short videos & tools to help your landscape survive the drought and thrive in the future!

BeyondTheDrought.com
BeWaterSmart.info

Roseville.ca.us/gardentour
Elkgrovegreenergardens.org

A Homeowner’s Guide to a WaterSmart Landscape

Many of the water providers in the Sacramento region provide rebates for customers to...
Next...

- Efficient irrigation components
- Proper scheduling