Download Tonight's Presentation

Folsom Water Conservation Webpage

- Rebates
- Water Wise House Calls
- Videos and Presentations
- Workshops
- Drought Info

Scroll to "Upcoming Workshops" for presentations









Manageable Maintenance



Cheryl Buckwalter landscapeliaisons @gmail.com



CLIA, QWEL,
ReScape
Landscape Consultant,
Designer, Educator









Manageable Maintenance Today's Topics

- Today's garden reality
- Plan with Purpose
- Soil
- Trees
- Plants
- Irrigation
- Mulch
- Pests
- Tips from the Pros
- Resources





Today's Garden Reality Balancing Act

These are tough times...

- For gardens & creatures
- It's not a matter of IF but WHEN
 - Drought
 - Water shortages & storm events
 - Fires
 - EXTREME WEATHERWHIPLASH
- Let's create resilient, easy-care gardens





Creating Resilient Landscapes







Challenges & Opportunities

Challenges

Workforce

Community design requirements

Different criteria, function, aesthetic

Knowledge, training, skills

Opportunities

Learn what TO DO & NOT DO
Be involved in decisions
Understand & request different
services





Let's Consider...

What we know now

Tree decline
Water runoff & waste
Don't know what NOT to do
Inferior quality materials
Curb appeal lacking
Minimal habitat value

What we NEED to know

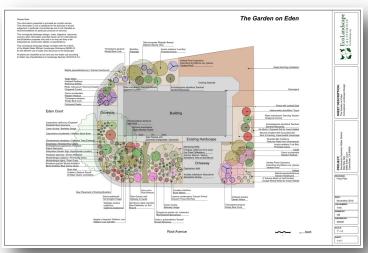
Shade is critical
Use less water & target
Seasonal needs of plants
Value for our dollar
Yes! Attractive all year

Support garden life!

How do we do this?



River-Friendly Landscaping











Plan with Purpose Function, Use, & Needs

What do you need?

- Screening
- Privacy
- Security
- Noise reduction
- On-site water catchment



What do you like?

- Style, feel
- Colors like/ dislike
- Activities
- Habitats
- Edibles
- Gardening

Decisions drive amount of maintenance required



The Heart of Our Landscapes SOIL





Healthy, fully functioning soil is balanced to provide an environment that sustains & nourishes plants, soil microbes, & beneficial insects

-- U.S. Department of Agriculture



How to Create Resilient Soil? Compost!



- Slowly releases nutrients to feed & support soil organisms
- Spread 1" of compost around base of plants
- Moisten & cover with mulch
- Over time, soil becomes like a nutrient-rich sponge



What <u>NOT</u> To Do To Soil

Compaction at new housing development

DO NOT

- Remove organic matter
- Apply salt-based, synthetic fertilizers & pesticides
- Cultivate or till one exception

WHY

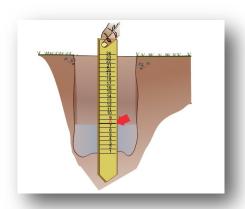
- Kills or damages beneficial soil organisms & biological network
- Compacts soil



Soil Type

How to determine yours

- Soil probe
- Jar test
- Percolation (dig a hole)
- Soil analysis by lab
- Feel



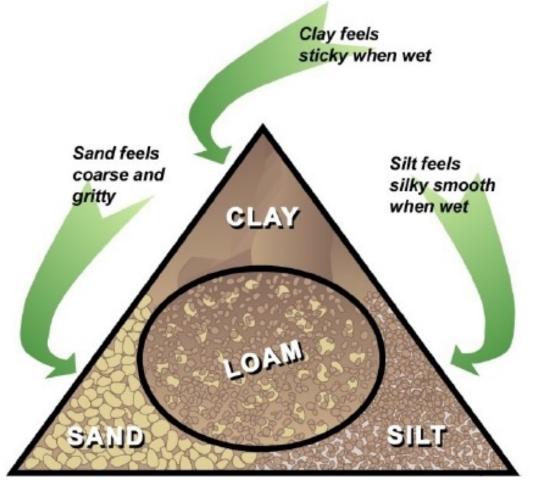








Soil Types





Sand Silt Clay

University of Nevada, Reno Extension

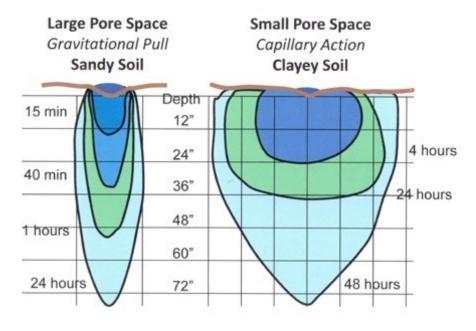


Why Soil Type Matters

- Water moves into & through soil differently depending on soil type
- Critical for determining when & how to irrigate

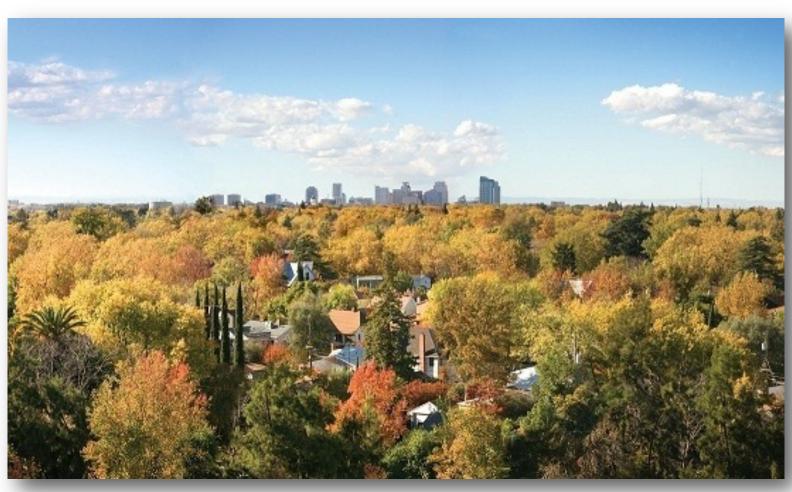






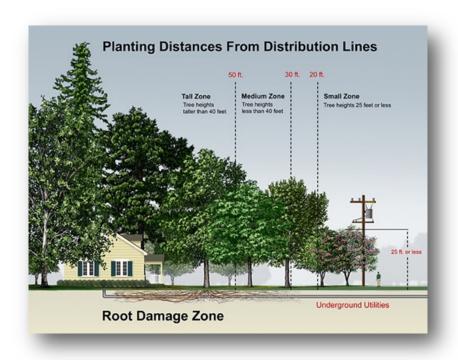


Shade Tree Canopy Trees Need Our Help





Placing Trees



Pacific Gas & Electric pge.com

- Look up, down, & out
- Deciduous trees on west & southwest side of house
- Solar panels, height & shade from tree
- Distance from structures, underground, & overhead utilities





Placing Trees



Cal Poly Selectree

https://selectree.calpoly.edu

Sacramento Tree Foundation

https://sactree.org



Healthy Soil Recipe for Trees

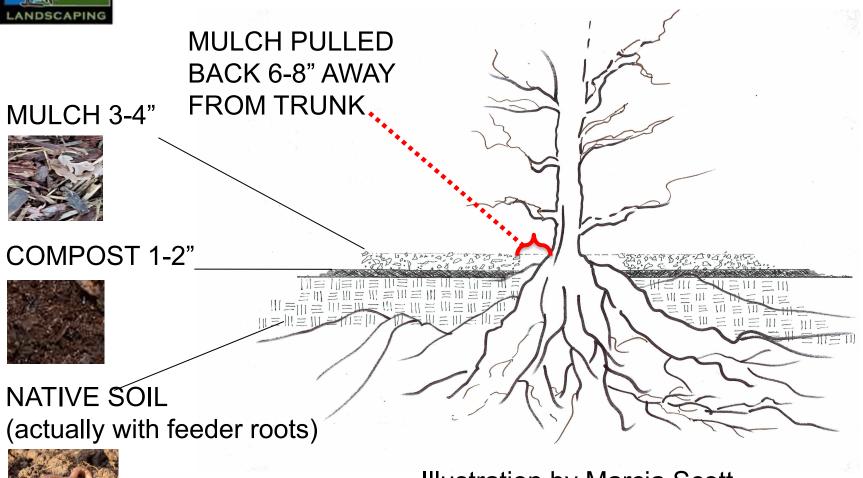


Illustration by Marcia Scott Marcia Jimenez Scott Landscape Designs



Tree Planting Do's

- Always remove nursery stake
- Plant higher than you'd think
- When planting
 - WATER, WATER, WATER
 BEFORE, DURING & AFTER
- Stakes ONLY IF NEEDED
- Stakes NOT permanent
 - Test, release flexible ties, re-tie (?), REMOVE

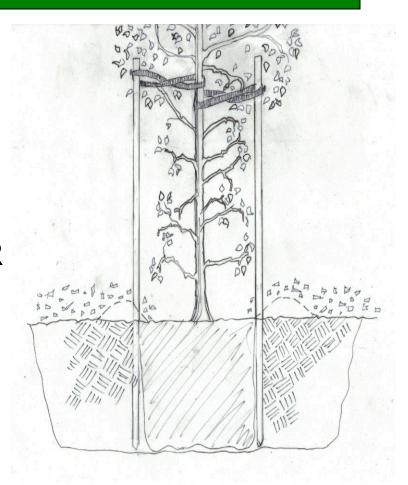


Illustration by Marcia Scott Marcia Jimenez Scott Landscape Designs



Tree Stakes What NOT to Do





Just say NO to synthetic turf Still requires maintenance



Planting ~~ Keep Low Limbs During Establishment







Watering <u>YOUNG</u> Trees Up to 5 Years After Planting

- Establish trees for resilience
- Roots mostly near trunk (don't water the trunk)
- Check soil moisture before watering
- Water slowly so water soaks in deeply
- · As tree grows, expand area being watered
- Gradually increase length of time between waterings based on water-use classification

"A mistreated or ignored young tree does not result in a beautiful mature tree."

Certified Arborist Marcia Scott Marcia Jimenez Scott Landscape Design

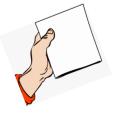


Watering MATURE Trees 5 Years & More After Planting

- Roots extend beyond canopy
- Check soil moisture
- Slowly soak root zone to 12" to 18"
- Keep water away from trunk
- Consider water & sun needs
- Mature native trees, may not need summer water, consult
 - Certified Arborist, <u>https://www.isa-arbor.com</u>
 - California native Plant Society, <u>https://www.cnps.org</u>
 - Reputable resources







Handouts



Trees Top Tips from Greg

- Trees Plant more trees
- Fertilizers (if you need them) – Use organic, slow release
- Pitch the pesticides Consider them a last resort



Greg Gayton
Green Acres Nursery & Supply
Horticulturist, CA Certified Nursery Professional

https://idiggreenacres.com



Get Organized & Use Right Tools for the Job

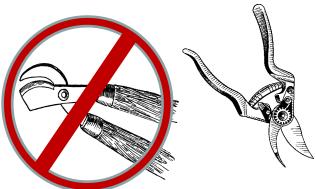




Clean tools before, during, & after use Designate places to store



The Right Tool for the Job



Bypass pruner Anvil pruner

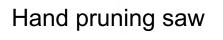








Assorted sizes of loppers





The Right Tool for the Job





WHY Prune Trees & Plants?

Some standard pruning purposes / goals:

- Safety / Reduce Risk
- The 5 Ds: Dead, Dying, Damaged, Diseased, Deformed
- Control the size
- Give a young tree or shrub healthy structure
- Shape
- Rejuvenate a perennial or shrub

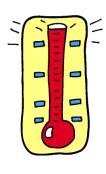
You may have several goals when you prune

Sacramento Tree Foundation https://sactree.org/tree-care-tips/how-to-prune-young-trees/



WHY Prune Trees & Plants?

Pruning goals:



- Create a fire-resilient Landscape
- Help your plants thrive in our high heat
- Support your local habitat
- Help your plants become more water efficient









WHAT Are You Pruning

Identifying the tree or plant helps remove the guesswork!

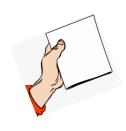
- What type is it? What is its natural form?
- Tree Deciduous or evergreen? How large when mature?
- Shrub Deciduous or evergreen? Flowers?
- Perennial Does it flower, have distinctive foliage? Size?
- Ornamental Grass
- Edibles



WHEN to Prune

- When is the best time to prune this plant for success?
- If timing isn't ideal, are there going to be consequences?
 - Lose blooms
 - Death
 - Cost to replace





Handouts





Arboriculture Atrocities DO NOT TOP TREES







Lagerstroemia
Crape Myrtles





Natural Shapes Beautiful!





Lagerstroemia, Crape Myrtle



Topping & Shearing Trees and Shrubs

- Causes Stress
 - Triggers survival & uses nutrients
- Causes Pest Problems
 - Large wounds & weak growth are susceptible



- Poorly attached new growth
- Creates Unnaturally Shaped Plants
 - Never regains a natural form
- Expensive
 - Needs frequent pruning, more inputs (water, fertilizer), excessive green waste





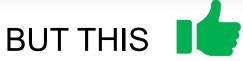
Arboriculture Atrocities



Quercus, Oak Trees



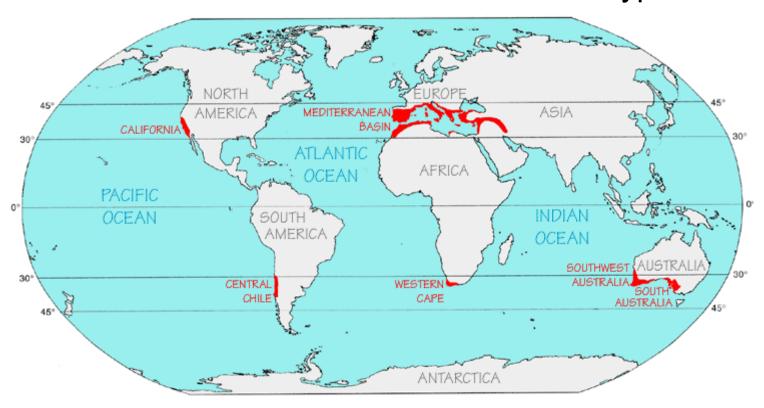






Plants

California natives & those from Mediterranean-type Climates



Ecosystems of the World, Vol. II, Mediterranean-Type Shrublands (F. DiCastri, D.W. Goodall and R.L. Specht, Eds.), Elsevier, Amsterdam, 1981. www.grabovrat.com



Invasive Plants





YES, PLANT

Aristida purpurea

Purple Three-awn

Photo:

Calscape.org





DO NOT PLANT
Stipa tenuissima
Mexican Feather Grass



YES, PLANT

Bouteloua gracilis 'Blonde Ambition'
Blonde Ambition Blue Grama Grass





Select Plants Based on...

Eschscholzia californica California Poppy



- Water & sun requirements
- Soil type (mixture of sand, silt, & clay)
- Life cycle, deciduous, evergreen



Vitex agnus-castus
Chaste Tree



Select California Natives



Philadelphus lewisii Lewis Mock Orange

- Can require 60% to 90% <u>less</u>
 water
- Year-round interest
 - Use 60-70% evergreen plants
- In harmony with natural plant communities
- Restore wildlife corridors
- Increase diversity unique to location
- Lower maintenance
 - When correctly designed & installed
- Misconceptions about natives



Pollinators

- Diverse plant palette
- Food sources throughout year
- Various flowers, sizes, & colors
- Clumps of plants (not just onesies)
- Disease & pest resistant plants
- Sunny locations



UC Davis Bee Haven
CNPS Calscape
Xerces Society
SMUD Pollinator Fact Sheet



Pollinators



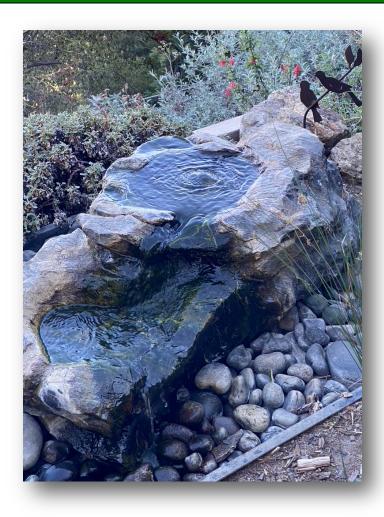
Attract & Support

- Birds, Bees, Bats, Butterflies...
- They need us & we need them
- Landscapes are interconnected ecosystems of living creatures
- Provide habitat More than just "plants"
- Use local CA native & plants adapted to soil & climate
- Plants of varying heights for nesting & security



Water for Pollinators & Other Garden Life







Plants Top Tips from Linden

- #1 priority
 RIGHT PLANT, RIGHT PLACE,
 & RIGHT SPACING
- Don't shear, especially when plants are about to bloom
 Deadhead after bloom
- Avoid "scatter planting" Instead, plant in masses



Linden Nies
Imagine Landscapes & Design
https://iamimagine.com



Plants Spacing, Placing, & Pruning

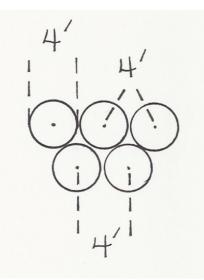
RIGHT PLANT, RIGHT PLACE = LESS WORK

- Fit to the space Mature height & width
- Easy care, less pruning
- Protect habitat
- Allow time to get established & grow to natural form





Loropetalum, Fringe Flower



Spacing Example

Mature size of plant 4 ft. wide

Install plants 4 ft. apart from center of one plant to center of the next one







Underestimated mature sizes



Water-use Classifications





High

Moderate?

Low

Very Low

None

Note: Once

Established

All CA Natives
Are NOT Low
Water-Use
Plants







Characteristics of Drought-Tolerant & Many Low-Water Use Plants



Stachys byzantina Lamb's Ear



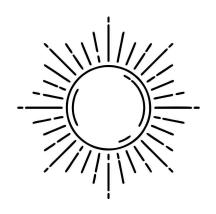
Rosmarinus officinalis
Rosemary

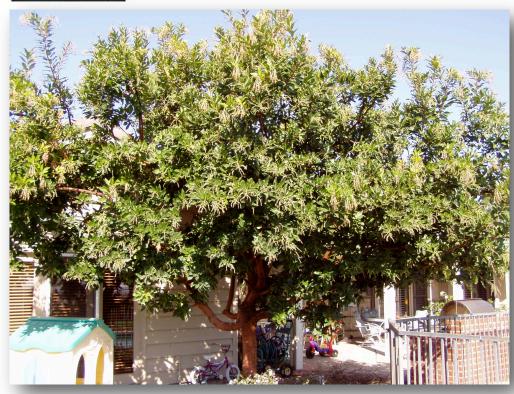


Salvia apiana
California White
Sage



Full Sun





Arbutus 'Marina' Marina Madrone Up to 30' Tall / 30' Wide Tree

- Direct sun all day
- 10 hours or more
- Tough conditions





Full Sun

Wrong plant, wrong place

- Hydrangea plants & fullsun Do not mix
- This is one way to provide shade



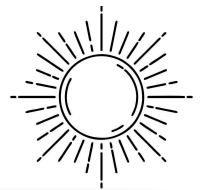
<u>And</u>

 A moderate to high wateruse plant





Part Shade



- Less than 5 hours of direct sun (mornings)
- Shade for half of day (especially afternoons)

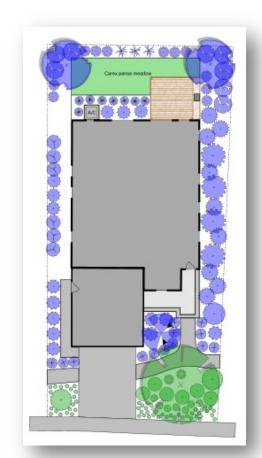
Carpenteria californica 'Elizabeth' Bush Anemone 4'-6' Tall / 4-6' Wide Shrub





Hydrozones & Efficient Use of Water

- Group plants with same water & sun needs
- Separate valves
 - Trees
 - Lawn
 - Edibles, fruit trees, etc.
 - Potted plants
 - When keeping mature plants
 - Plants that need seasonal rainfall & little, if any, supplemental water Not always possible, especially in existing landscapes

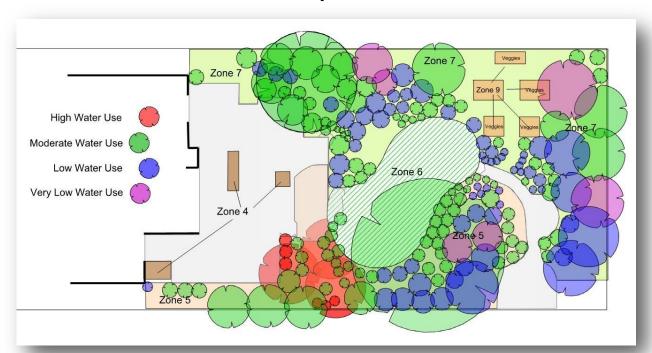


Correct Hydrozoning



Mixed Water-use Zones

- Do NOT mix plants with different water-use classifications in same zone / same valve
- Wastes water, requires increased care, & results in plant death

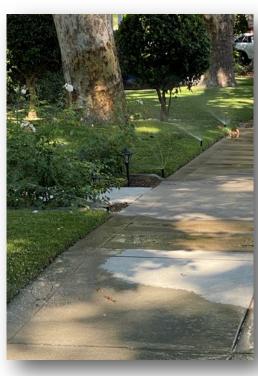


Incorrect Hydrozoning

Hydrozone plan
Courtesy of
Lori Palmquist,
https://www.puddle-stompers.com



Let's Talk About Lawns



- Do you need grass? Have it!
- Function, fits use
- Water it effectively & efficiently
- Use rotary- & precision-type nozzles
- NO runoff







Reduce Unused Lawn & Prevent Runoff

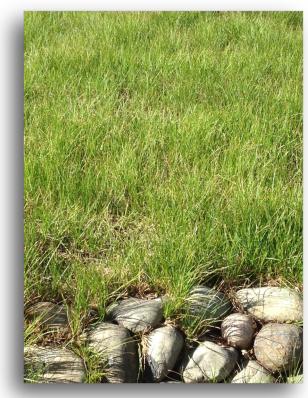


Photo: Kathleen Olson

- Create "buffer zone" between lawn & impermeable materials
- Watering CA native plants
- Sprinklers with rotatory nozzles for lawn
- Drip for plants



Lower Water Lawn Option



Carex praegracilis
CA Field Sedge



"No Mow" / "Mow Free"
Festuca idahoensis, Festuca
rubra, Festuca occidentalis, blend



Low Water Groundcover/Lawn Substitute



Phyla (Lippia) nodiflora, Kurapia Photo: Delta Bluegrass



Photo: Roxy Designs



Low Water Groundcover/Lawn Substitutes





Photo: Jacky Surber, Urbafloria

Myoporum parvifolium, Creeping Myoporum



Low Water Groundcover/Lawn Substitute





Dymondia Dymondia margaretae

Newly planted Dymondia with drip line emitters



Example Project Before & After

Unused, thirsty lawn Overspray & runoff

Increased plant diversity Year-round color & interest Supports pollinators

Design & photos by Soleil Tranquilli

Tranquill Gardens

https://www.tranquillgardens.com



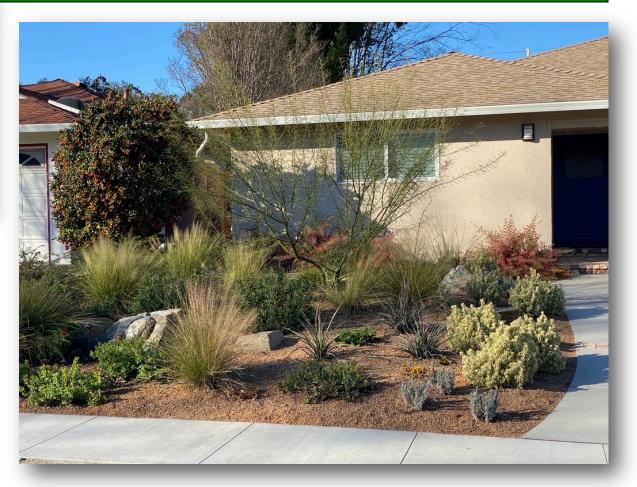


Example Project Before & After

Rainwater storage tank

Rain Garden

Keep water on property



Design by Soleil Tranquilli Tranquill Gardens

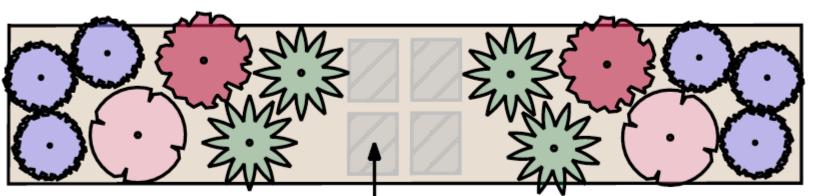


Ditch the Strip

- Diversity of plants
- Year-round interest
- Drip instead of sprinklers
- Prevents runoff
- Less maintenance

California Native Plants
Low Water & Full Sun to Part Shade





Exposed Aggregate
Pre-cast Stepping Stones



Ditch the Strip





Design & photos by Soleil Tranquilli Tranquill Gardens



Pruning Plants

- Shrubs
- Perennials
- Ornamental Grasses

How **not** to prune



How **not** to prune





Unnatural Shapes & the Wrong Tree





Photo: Darleen Halsted, DHLandscape



Creative, but...





Do Not Shear Shrubs

Shearing & plant bangs

- = Increased waste to landfills
- = Plant death







Pruning Techniques Natural Look





Use hand pruners to trim into canopy of plant No visible stubs

Shearing results in ugly, exposed stubs



Interior Pruning Technique



More uniform, natural shape



No exposed blunt ends

Branch to be removed

Lift surrounding branches & cut out branch to be removed



Pruning Perennials for Garden Life

- Leave some spent flowers, seed pods, & old stems as long as possible for habitat = food, shelter, safety (especially in winter).
- Refer to resources for pruning CA native plants.













Pruning Ornamental Grasses

- Don't cut back grasses until late winter / early spring (including seed heads) / leave during winter for habitat.
- Before cutting, check for nesting baby birds.
- Evergreen grasses, use small rake to remove dead leaves.







Pruning Ornamental Grasses

INCORRECT





Photos courtesy of Mountain States Wholesale Nursery



Pruning Ornamental Grasses

CORRECT

Before new growth, prune flat top

Bouteloua gracilis 'Blonde Ambition'







Practical Irrigation

Highly efficient rotary-type nozzles in sprinklers

Cycle & Soak



"Drip the plants, Spray the Lawn"

Lori Palmquist, CID, CIC, CLIA, CLWM https://puddle-stompers.com/





Sink Overspray Into Buffers & Permeable Materials

Decomposed Granite (D.G.) path



Recycled concrete with gravel



Flagstone with gravel joints

Concrete pavers & gravel





Drip Emitters Two Types





Point Source

- Placed at & waters plants
- Option for sparsely planted areas
- Higher maintenance

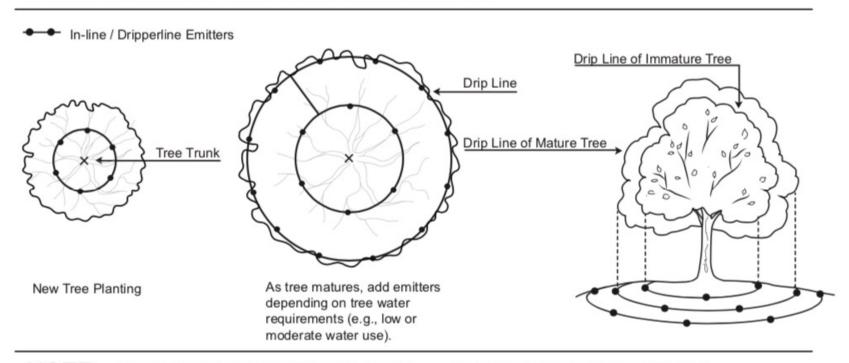
Line Source

- Built-in emitters in grid pattern
- Waters entire area as rain would
- Less maintenance



Emitter Placement

TREE EMITTERS - EXAMPLE PLACEMENT



NOTE: - The spacing and number of emitters are examples.

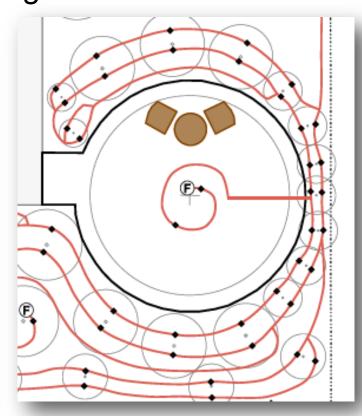
 Specific spacing and number of emitters will depend on plant size at installation, plant water requirements, soil type, and emitter flow rate.

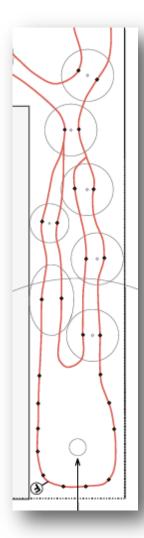


Efficient Irrigation Strategies

- Flowing, organic patterns
- Good for challenging areas in established gardens









Drip Grid for Dense Plantings



- Newly installed plants
- Must have water on root ball & existing soil
- Bridges interface between both soil types
- Encourages roots to extend into existing soil



Resist the Urge to Mix

Do NOT put these on the same zone (valve)
Sprinklers



Drip emitters



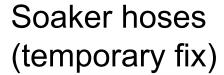


Don't Recommend

Microsprays



Incorrect
Tree Drip
Placement











Practical Irrigation Tips

- Call for a FREE Water Wise House Call
- Do a garden walk about
- Turn on irrigation system 1 valve at a time
- Listen, look, & flag
- Make repairs & adjustments
- Speaking of repairs & fixes...



Must have emitter on root ball



Emitter lines too far from root ball, dry rootball



Fixes

Dr. Zip emitter attached to dripline







Fix a Leak Technique

















Cut
Flush & clean
Attach to tubing
Screw to tighten



Leak Fixed



Tubing secured with landscape staples

Two product examples







Eliminate Runoff With Terraces







Eliminate Runoff by Shaping the Soil - Creek Beds

Slow, Spread, & Sink

- Rainwater IS a resource
- Keep it in your landscape
- Create areas with shallow depressions & swales
- Use plants that tolerate both wet & dry conditions
- Include include drip irrigation
- Maintenance Remove leaf build up redistribute mulch





USE THIS



NOT THIS



MULCH

- Any material on soil surface
- But, organic materials best for soil, enhance plant growth & appearance of landscape
- NO plastic, NO rubber, NO dyes





Retain Materials with Edging

EDGING



Composite Edging



Metal Edging



Metal Edging with Flagstone, Mulch, and Decomposed Granite (D.G.)



Mulch Mistakes





Mulch Top Tips from Julie

- 3" minimum of mulch
- NOT in contact with tree / plant
- "Give your garden the finger" (use your index finger to check soil moisture)

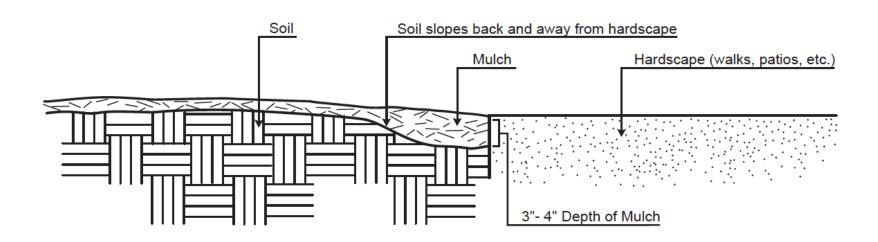


Julie Barbour
Qualified
IPM Advocate & Educator
Our Water Our World
https://ourwaterourworld.org



Mulch Preparation & Application

MULCH DIAGRAM



Use soil excavated from hardscape edges to form mounds & contours

Diagram: Landscape Liaisons & EcoLandscape California



What's Okayish & Not So Good?







Natural shapes No tree stakes Terracing



Synthetic turf
Compaction
Hot, impacts soil life

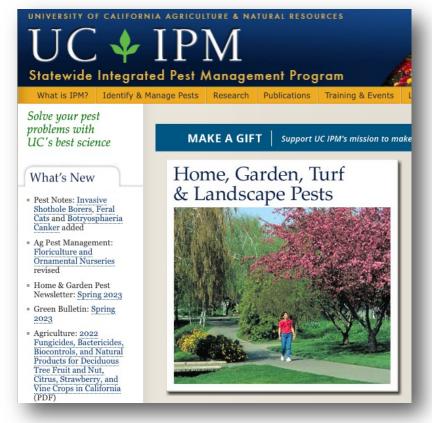


What's Okayish & Not So Good?





Manage Pests



https://ipm.ucanr.edu



- First Identify / good bug or bad bug
- Monitor & manage pests (insects, weed, diseases)
- Little to no action may be necessary
- Look for signs of plant stress
- Remove weeds, especially when young



Convergent Ladybeetle Identification is Critical





GOOD BUG



Credit: UC IPM Jack Kelly Clark





Pest Management Strategies

- Biological Natural enemies
- Cultural e.g., Changing irrigation practices
- Mechanical & physical Traps, mulch, barriers
- Chemical Use pesticides as a last resort & least harmful
 - Do not use, especially to protect pollinators, people, & other garden life!





Resources Visit Demonstration Gardens









Resources Seasonal Maintenance



Say good-bye to
Daily & Weekly Garden Care
See Handouts for
Lower Maintenance
Resources



Spring



Summer



Winter

Fall



Tree Resources

Gardening for Wildlife - Native Keystone Plants for Wildlife by Doug Tallamy,

https://www.youtube.com/watch?v=O5cXccWx030

SacTree Shady 80, SacTree.com/shady80

SelecTree, https://selectree.calpoly.edu

Trees are Good, International Society of Arboriculture,

https://www.treesaregood.org





Resources



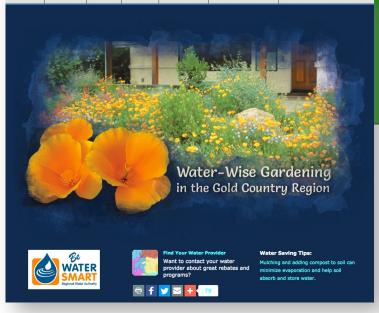


https://bewatersmart.info



Cycle and Soak: The Secret to Smart Watering and Healthier Plants

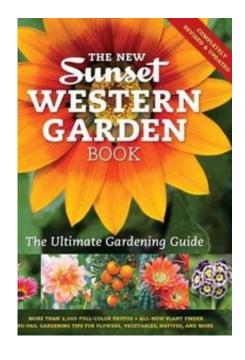
HOME GARDENS PLANTS MY LIST RESOURCES WATERING GUIDE

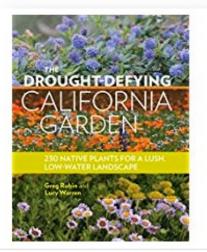


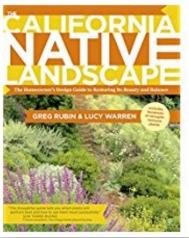
BeWaterSmart.info



Resources







CalScape.org



Resources roseville.ca.us/plantlist

WaterSmart Plant List for the Sacramento Region

- Uses & Benefits
- Water-use classifications
- Common names linked to online photos & more

WaterSmart Plant List for the Sacramento Region Very Low, Low, and Moderate Water-Use California Natives

Genus	Species	Variety / Cultivar / Hybrid	/ Common Name Tree Symbol = Tree is on Roseville Electric Shade Tree Rebate Program Approved Tree List Click on Name for Online Photos	Water Use	Plant Type	Sun Exposure	Climate Zone	Mature Size Tall (T) / Wide (W)	Plant Cover- age Value (Sq. Ft.)	Bloom Color / Season	Ø	1	*	Š	4	ā
													Uses /	Benefits	3	
Trees - Evergr	een															
Calocedrus	decurrens		Incense Cedar	м	Evergreen	FS/PS	2-12, 14-24	70-90' T / 10- 15' W	123	Inconspicuous	Y	Y			Y	
Quercus	agrifolia		Coast Live Oak	VL	Evergreen	FS	7-9, 14-24	40-60' T / 40- 50' W	1,590	Inconspicuous	Υ	Y	Y	Y		Y
Quercus	chrysolepis		Canyon Live Oak	L	Evergreen	FS/PS	3-11, 14-24	20-60' T/W	1,257	Inconspicuous	Υ	Υ	Υ			
Quercus	wislizeni		Interior Live Oak	VL	Evergreen	FS/PS	7-9, 14-16, 18-21	30-75' T / 40- 80' W	2,827	Inconspicuous	Υ	Y				
Thuja	plicata		Western Red Cedar, Giant Red Cedar, Giant Arborvitae	М	Evergreen	FS/PS	A3, 1-9, 14-24	50-100' T / 25- 60' W	1,452	Inconspicuous		Y	Υ			
Thuja	plicata (standishii x plicata)	'Green Giant'	Green Giant Arborvitae	М	Evergreen	FS/PS	A3, 1-9, 14-24	30-50' T / 10- 20' W	177	•		Y	Y			

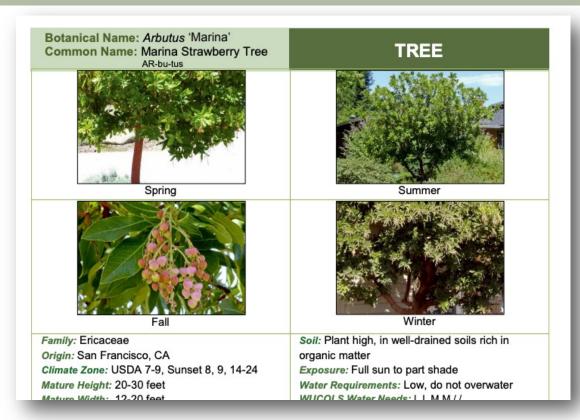




Four Complete Landscape & **Irrigation Plans**

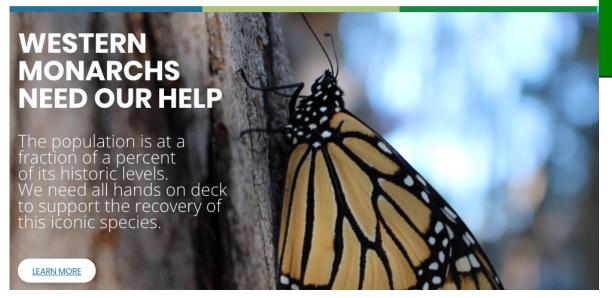
- 75 Plant Profiles
- Irrigation Equipment
- Guided Verbal Tours of Plans
- Interactive Designs: See plants, features, & learn about water-saving irrigation equipment and practices

Download Learn



https://puddle-stompers.com/waterwonk/new-ca/





Xerces Society

Gardening for Wildlife
YouTube video



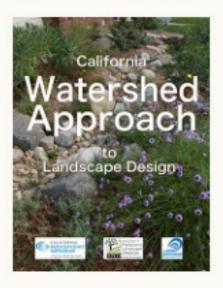


Resources



Our Newest Handbook

Download California
Watershed Approach
to Landscape Design,
which was made
possible through a
collaboration with
Green Gardens Group
(G3), California Water
Efficiency Partnership
(CalWEP), and
Surfrider Foundation.



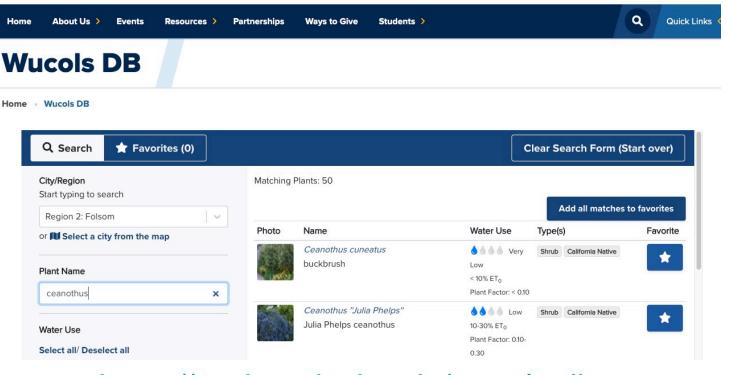
Association of Professional Landscape Designers California Chapter ~~ apldca.org



Resources Water-use Classifications



California Center for California Center for Urban Horticulture



https://ccuh.ucdavis.edu/wucols-db



Scheduling & Watering Apps, & Controllers



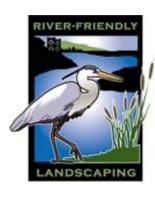
Rachio





B-hyve

www.beyondthedrought.com



Manageable Maintenance

Questions...

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Special thanks to:
City of Folsom
Marcia Scott, Marcia Jimenez Scott Landscape Design
Soleil Tranquilli, Tranquill Gardens
Steve Zien, Living Resources Company, Retired

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