

# DROUGHT TOLERANT

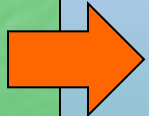


# LANDSCAPE MAINTENANCE

*Deva Luna – EarthCare Landscaping 408-871-2792*

## Fourth of a 4 part series

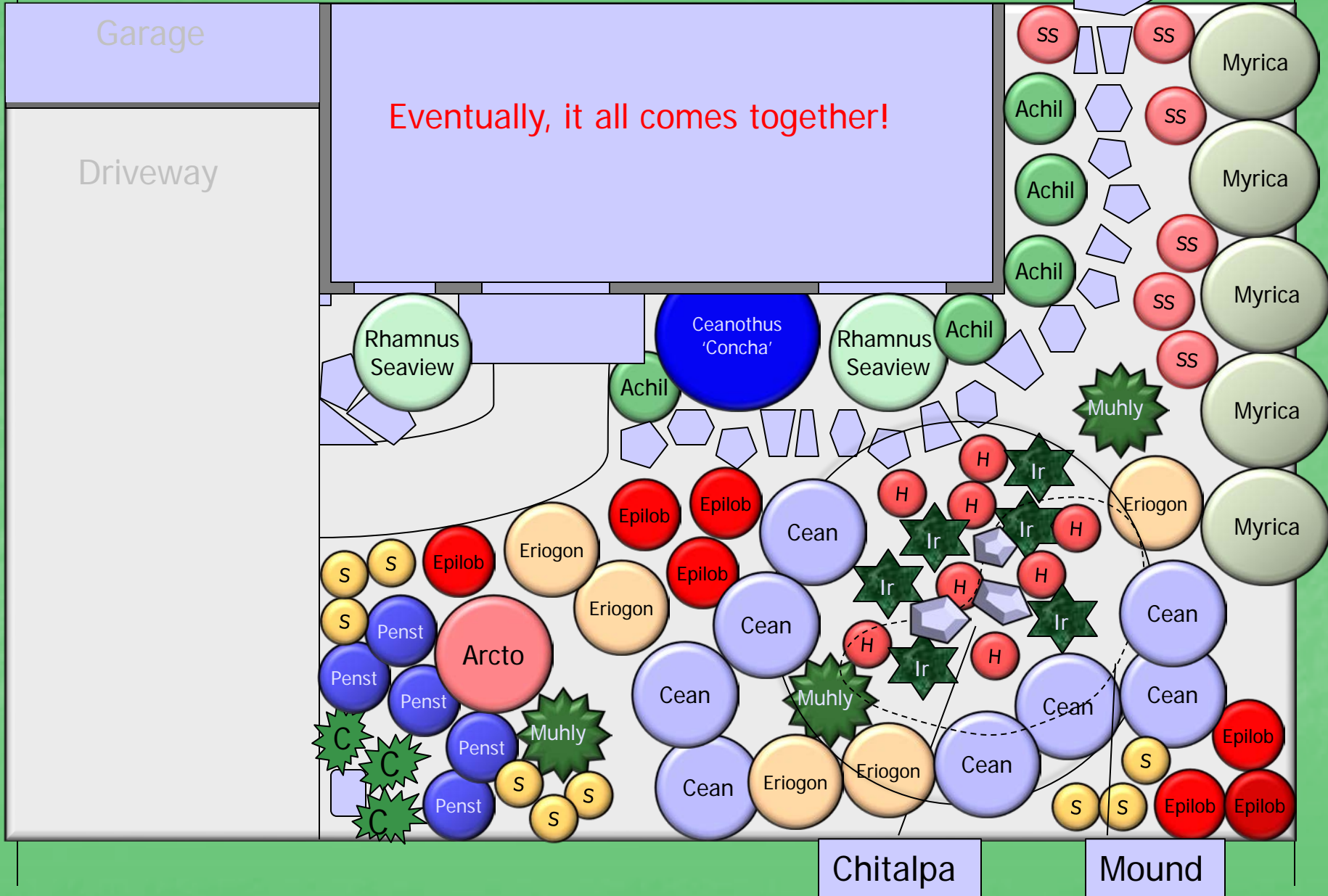
1. Drought Tolerant Landscape Design  
April 4, 2017
2. Drought Tolerant Plant Selection  
April 25 , 2017
3. Drought Tolerant Landscape Installation  
May 2 , 2017
4. Drought Tolerant Landscape Maintenance  
May 16, 2017



# #1 Design recap

- Goals
- Common mistakes
- Design concepts
- Elements of the garden  
(large and smaller bones, guts, skin, accents)
- Hydrozoning
- Steps in creating a design

# Create a plan step by step

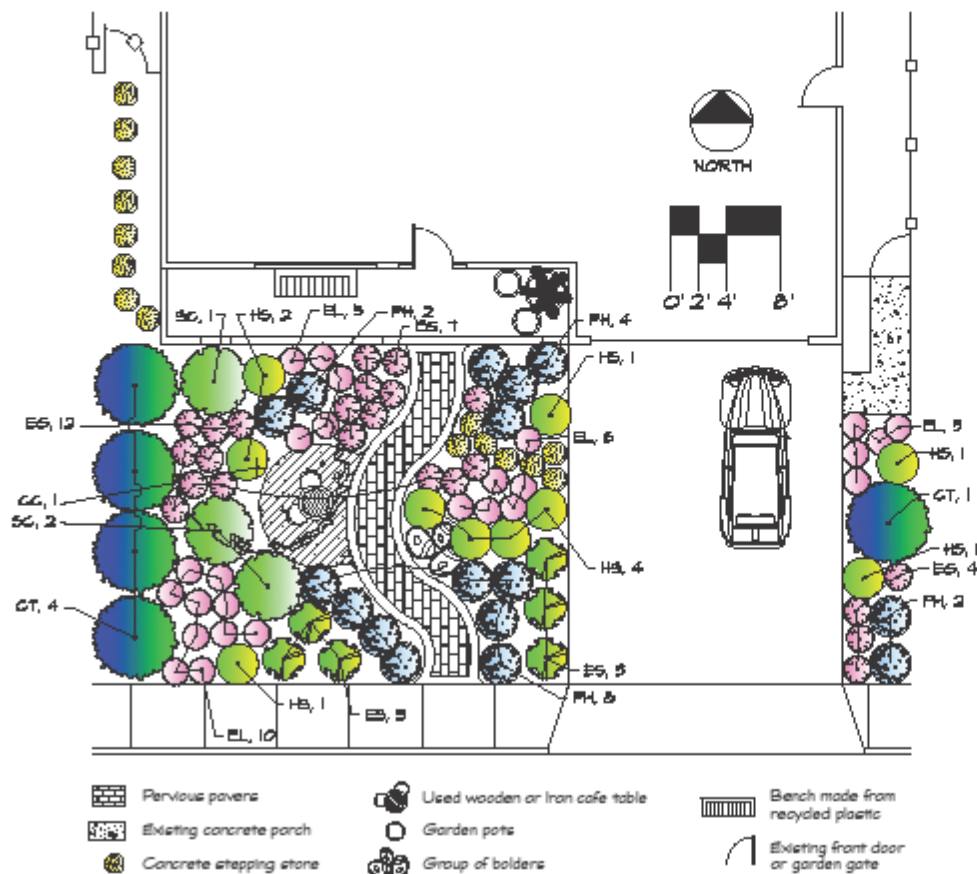




GREEN GARDENS HEALTHY CREEKS

# Café Garden (Small, Sunny Yard)

Sustainable concept design for yards in Santa Clara Valley



Rosy Buckwheat  
*Erigeron grande* var. *rubescens*



California Fuchsia  
*Epilobium septentrionale*  
'Wayne's Silver'



Seaside Daisy  
*Erigeron glaucus* 'Wayne Roderick'



Beard Tongue  
*Penstemon heterophyllus*  
'Margarita Bop'



Cleveland Sage  
*Salvia clevelandii*



Sticky Monkeyflower  
*Mimulus aurantiacus*

### About the Concept Design Series

These designs are simple concepts to provide inspiration and ideas. Check with local nurseries, landscapers or other sustainable garden designers to help choose the best plants for your yard.

10 sample plans / City of San Jose website

<http://www.sanjoseca.gov/index.aspx?NID=3734>

## #2 Plant selection recap

- How to determine what is drought tolerant?
- Lists of trees & edible trees
- Shrubs, vines, ground covers
- Perennials, annuals, bulbs
- Succulents, grasses, ferns
- Reference books
- Nurseries

# WUCOLS IV

## Water Use Classification of Landscape Species

- 3500 species of landscape plants  
(Including 44 different Manzanitas, 49 Oaks, and 90 Sages!)
- Listed by the amount of water they need
- Compared to irrigated turf grass (% ET<sub>o</sub>)

Category	Abbreviation	Percentage of ET <sub>o</sub>
High	H	70-90
Moderate/Medium	M	40-60
Low	L	10-30
Very Low	VL	< 10

# HELP WITH HYDROZONING!

## [www.waterwonk.us](http://www.waterwonk.us)

### California plant database search tool

Choose city ► Plant search ► My plant list

1

A plant's water needs vary with the climate region where it will live. Choose a city and the tool will place your search in the correct WUCOLS climate region.

2

Proceed to the plant search page, and search to your heart's content. There are 12 different search criteria you could specify, or just bring up the entire regional list, or the full list showing all plants and all 6 regions. You will be presented with the WUCOLS water-use value for each plant.

3

Create a list of plants for your project. This list can be printed or downloaded to your favorite spreadsheet program. We will save your plant lists for you in our database.

- You may have one courtesy plant list for each region. To access your existing plant list for any given region, you must first choose a city in that region, and then go to the plant search page. Your list may be accessed from the "Plant Search" page.
- In order for you to create plant lists, you must register for the site. Signing up is free, quick, and easy to do.

*What is WUCOLS?*

#### **Water Use Classifications of Landscape Species**

*Water Use Classifications of Landscape Species (WUCOLS) provides a guide to estimating irrigation water needs of landscape plantings in each of 6 distinct California climate regions. WUCOLS was developed by the University of California Cooperative Extension in cooperation with landscape professionals and funded by the California Department of Water Resources.*

 [Click pdf icon to view or download WUCOLS IV plant list. Learn more about WUCOLS \[here\]\(#\)](#)

Get started





## #3 Installation recap

- Costs
- Tools, materials, sourcing
- Soil tests, labs
- Sheet mulching, mulch
- Mounds, slopes
- Mycorrhizae, compost, compost tea
- Contractor math
- Drip irrigation

# Maintenance focus

- Building the soil-foodweb
- Fertilizing
- Organic weed control
- Pests
- Pruning
- Watering, irrigation checks

# Different Kind of Maintenance

- If you have “Lost Your Lawn”, you will no longer need weekly maintenance
- Periodic additions of mulch when needed
- It is best to keep blowers to a minimum (rake the autumn leaves, or leave them as mulch)
- No pesticides (kills the good bugs and the soil biology)
- Selective shaping; no pruning with a electric hedge shears

Best book for maintenance (Spanish and English)

*Care & Maintenance of Southern California Native Plant Gardens*

by Bart O'Brian. \$30 online from Rancho Santa Ana Botanic Gardens

[www.rsabg.org/shop](http://www.rsabg.org/shop)

- Find a Green Gardener:

<http://www.mywatershedwatch.org/findgardener.html>

# Quarterly Maintenance

## Spring

- Turn on irrigation system
- Check irrigation system for leaks, broken lines
- Apply compost tea

## Summer

- Keep an eye on irrigation
- Watch for pests (IPM)
- Replenish mulch if needed
- Some deadheading (remove dead flowers to encourage bloom)

## Fall

- Turn down irrigation timer
- Rake leaves (put in compost pile)
- Cut back perennials after bloom, groom grasses
- Hand weeding
- Apply compost tea

## Winter

- Turn off irrigation system
- Continue hand weeding where needed
- Pruning of woody trees and shrubs

# REMEMBER

## Santa Monica Demonstration

### “garden/garden” ?



Conventional Landscaping

California Natives



# The Numbers Speak for Themselves

## Traditional Landscape



57,000 Gallons

**WATER**



670 Pounds

**YARD WASTE**



80 Hours

**MAINTENANCE  
HOURS**

## Sustainable Landscape



6,000 Gallons

**WATER**



250 Pounds

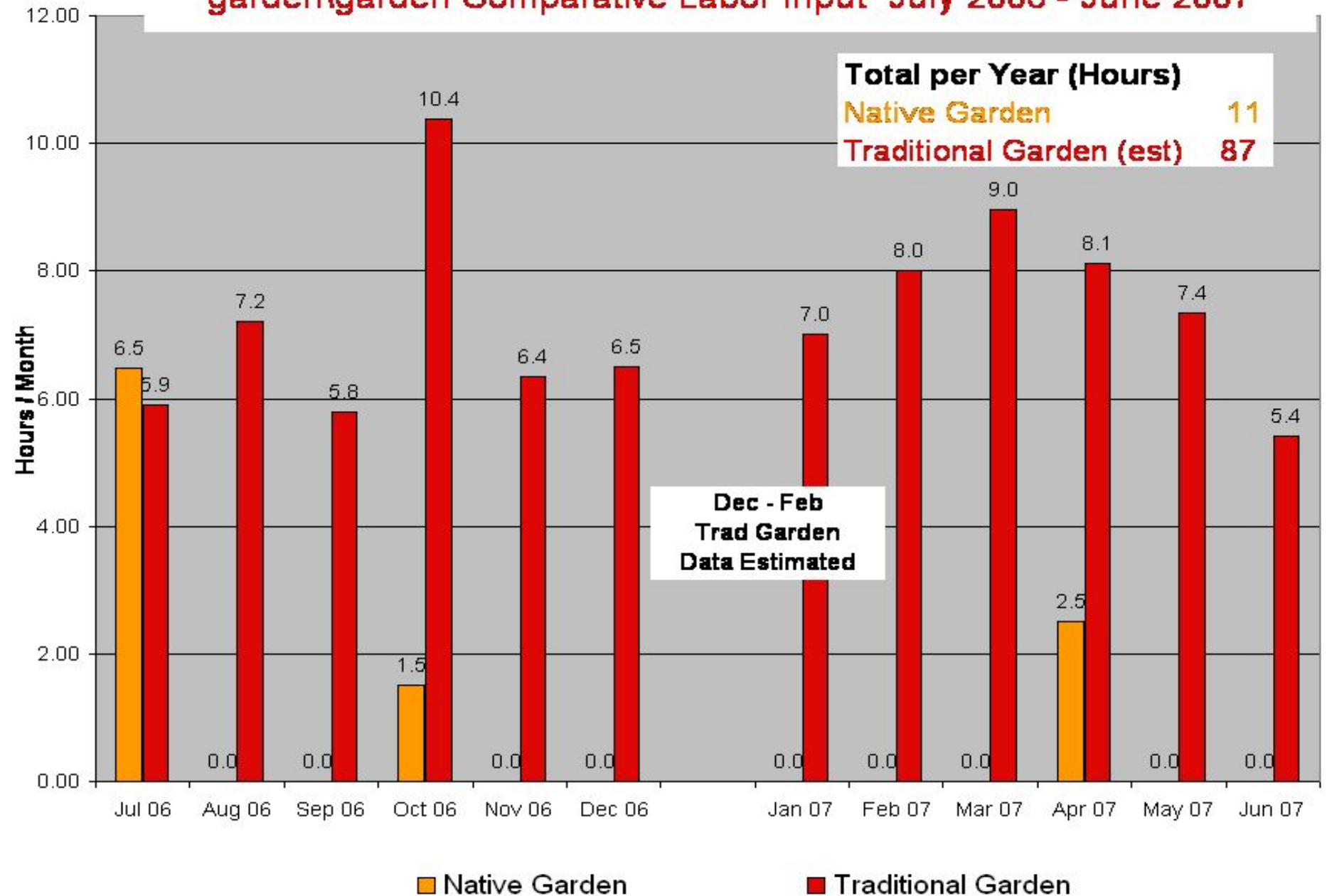
**YARD WASTE**



15 Hours

**MAINTENANCE  
HOURS**

# garden\garden Comparative Labor Input July 2006 - June 2007



# Sustainable Practices

## HEALTHY SOIL!

- Organic fertilizers
- Mycorrhizae
- Compost
- AACT (Aerobically activated compost tea)
- Sheet Mulch
- Electric blower, just for paths

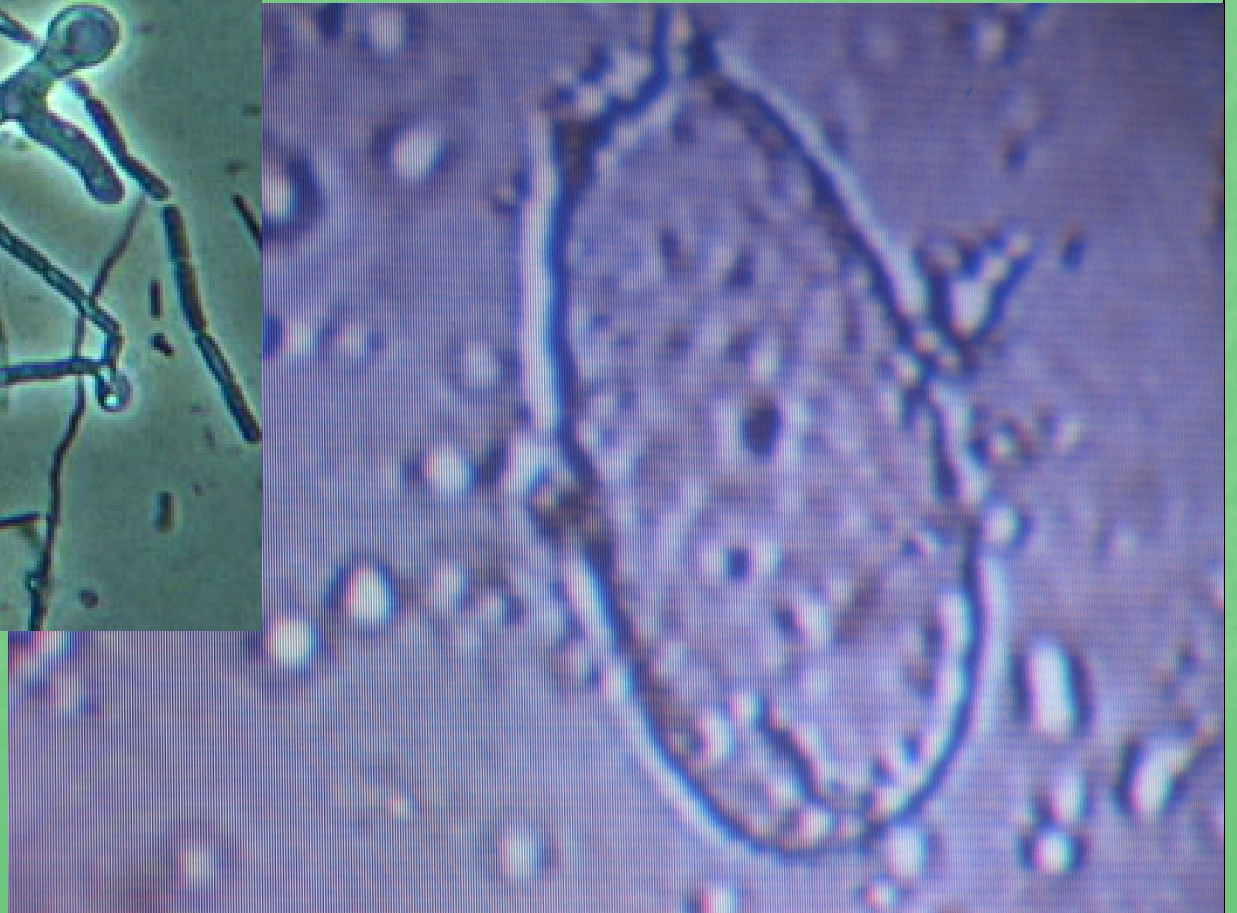
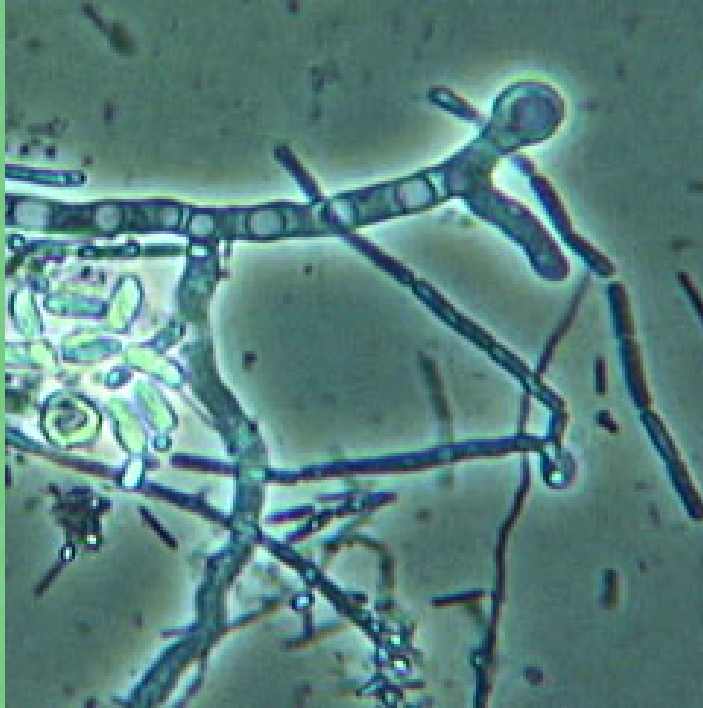


# CREATING HEALTHY SOIL

**A biologically alive soil holds water well and drains well**

- Add organic matter (compost)
- AACT (Actively Aerated Compost Tea) available at Lyngso Garden Materials, etc.
- Don't compact (no digging when soggy)
- Don't poison the Soil Foodweb with pesticides, herbicides, or chemical fertilizers
- Protect the soil with organic mulch

# SOIL THAT IS ALIVE



# Fertilizing

- Native plants - no fertilizer
- Exotic non-native ornamentals and fruit trees
- Specialized organic fertilizers for Roses, Citrus, Azalea/Rhody/Camellia
- EB Stone, Dr. Earth, fish emulsion
- If you need to (sandy soils?), use a low first number (Nitrogen)
- Apply at  $\frac{1}{2}$  -  $\frac{1}{3}$  recommended dose
- Perennials/evergreens: apply March-April with the new growth
- Deciduous plants: apply when they leaf out in Spring

# Sustainable Practices

## WEED MANAGEMENT

- Mostly pulling, hoeing, etc.
- Get rid of invasives, Privets, Feather Grass
- Mulch & sheet mulch
- Paper under mulch (organic weed block)-  
mainly used at installation time
- Corn gluten
- Organic sprays, flaming, steam, etc.  
often not worth the cost or effort

# Sustainable Practices

## PEST MANAGEMENT

- Learn IPM
- Beneficials like Delphastus beetles for white fly
- Horticultural or Neem oil
- Foliar sea kelp for bacterial molds
- Dormant spray
- Insecticidal soap
- Compost tea as a preventative for Peach Leaf Curl

# General chores

- Remove dead, dying, diseased plants
- Top off mulch
- Clean up piles of leaves and branches
- Remove dead wood, etc.

# When to plant?

- Fall is best, Spring next best, then Winter. Summer is most stressful.
- Annuals: Oct – November
- Shrubs: Oct – February
- Riparian plants, any time of year (must be irrigated anyway)

# PLANTING TIPS

- Be aware of the mature size, and site requirements of each plant
- Choose “garden adaptable” plants
- Skip the fertilizer
- Plant in native soil
- Apply beneficial mycorrhizae at time of planting
- Improve the soil - mulch and compost tea
- Plant high or on a mound





Photo and Design: Stephanie Morris



Design: Annaloy Nickum Photo: Deva Luna



Design: Sherri Osaka , Installation: EarthCare Landscaping

# Pruning Tips

- Remove all dead, dying & diseased
- Plant separation (avoid overplanting)
- Crown reduction, selective natural look
- Make proper cuts, 1/8 inch above collar
- Learn the plants! If in doubt, only remove 1/3 of plant
- Prune broad-leaved evergreens and shrubs in early summer
- Want a fuller, denser plant? Tip prune often. Pretend you're a deer

# Minimal Pruning Only

- Ceanothus
- Manzanita
- Coffeeberry (if planted in correct location)
- Indian Hawthorn



# Yankee Point California Lilac

*Ceanothus griseus horizontalis* 'Yankee Point'

# Wait until frost is over

- Mexican Sage
- Geranium (Pelargonium)
- Citrus
- Avocado
- Bougainvillea
- Fuchsia

# Mexican Sage

*Salvia leucantha*





# Heavy Pruning Okay

- Baccharis (Coyote Bush)
- California Fuchsia
- Matilija Poppy



# DWARF COYOTE BUSH

*Baccharis pillularis* 'Twin Peaks'



# MATILIJA POPPY

*Romneya coulteri*

# Dead heading & cutting perennials

- Deadhead during bloom season to remove faded flowers & encourage reblooming
- Cut back in Fall/Winter to refresh and make more compact (remove brown foliage and any legginess)



Sulfur buckwheat

*Eriogonum umbellatum* var. *polyanthum*



# CALIFORNIA FUCHSIA

*Epilobium 'Select Mattole'*

# WATERING TIPS

- Test your soil for drainage speed
- For better drainage, plant on a mound
- Even drought tolerant plants, if nursery grown, will need irrigation for at least 2-3 summers.
- In general, water infrequently, but deeply
- But really, check the soil with your hand and/or moisture meter!
- Overhead watering not recommended due to fungal pathogens caused by moist warm conditions.

# How often to water???

## “ . . . .It depends. . . ”

- Water the pot before planting
- Water the plant right after planting (soak the rootball and surrounding area)
- Even drought tolerant plants need extra watering while establishing
- Rough sample guidelines will vary with soil type, time of year, irrigation system, sun/shade, wind, etc.
- CHECK if top two inches dry out between watering (good)
  
- NEW for one month –to get roots into soil: 30 min every 3 days
- FIRST Summer – 1hour/every 5 days (point source), 2 hours for inline
- SECOND Summer – 1 hour/every 10 days (point source), 2 hours for inline
- THIRD Summer – 1.5 hours/every 15 days (point source), 2-3 hours inline
- Increase intervals between watering, not reduce amount of water!





**Expandable drip irrigation**



Netafim Drip Tubing Grid can be buried





# Plants that are summer dormant



**No water in Summer**



# Woolly Blue Curls

*Trichostema lanatum*



# No Summer water when established

- Coffeeberry
- Some Ceanothus
- Toyon
- Flannelbush
- Western Redbud
- Woolly Blue Curls
- Douglas Iris
- Many Buckwheats
- White Sage
- Dara's Choice Sage
- Cleveland Sage



# MANZANITA

*Arctostaphylos 'Dr. Hurd'*



**CEANOTHUS 'CONCHA'**



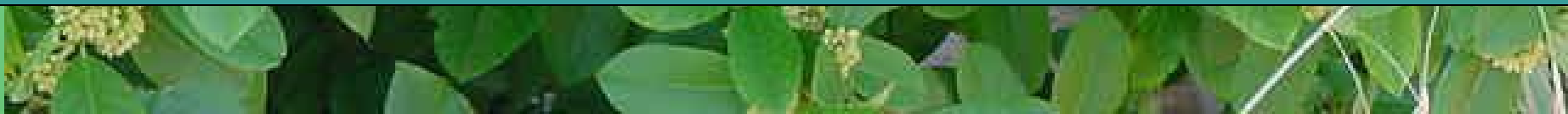
**Toyon**  
***Heteromeles arbutifolia***







**California Coffeeberry**  
***Rhamnus californica* 'Eve Case'**





**California Grape**  
***Vitis californica* 'Roger's Red'**



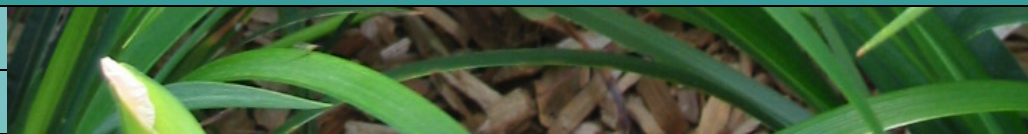
# Cleveland Sage (with Monkey Flower)

*Salvia clevelandii*





**Dry Shade**





# Perennials





FOOTHILL PENSTEMON  
*Penstemon heterophyllus*



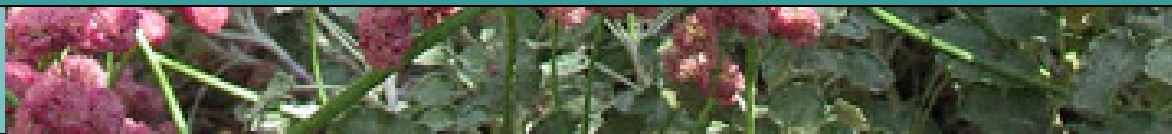
**Yards with lots of perennials need annual pruning**





# ROSY BUCKWHEAT

*Eriogonum grande var. rubescens*







# Cedros Island Verbena

*Verbena lilacina* 'De La Mina'



**COYOTE MINT**  
***Monarda villosa***



Photo: Deva Luna

# Beach Aster

*Erigeron glaucus* 'Wayne Roderick'



**Hummingbird Sage**  
***Salvia spathacea***

# Pruning Grasses

- Cut back in Winter, if at all
- Better to “groom” with hands or a steel rake for a more natural look

# Grasses



**Deer Grass *Muhlenbergia rigens***



# Idaho Fescue

*Festuca idahoensis* 'Siskyou Blue'



Design & Installation: Erin Dougherty Photo: Deva Luna

# BERKELEY SEDGE

*Carex divulsa*





Design & Installation: Erin Dougherty

Photo: Laura Gardner

# Berkeley Sedge after haircut

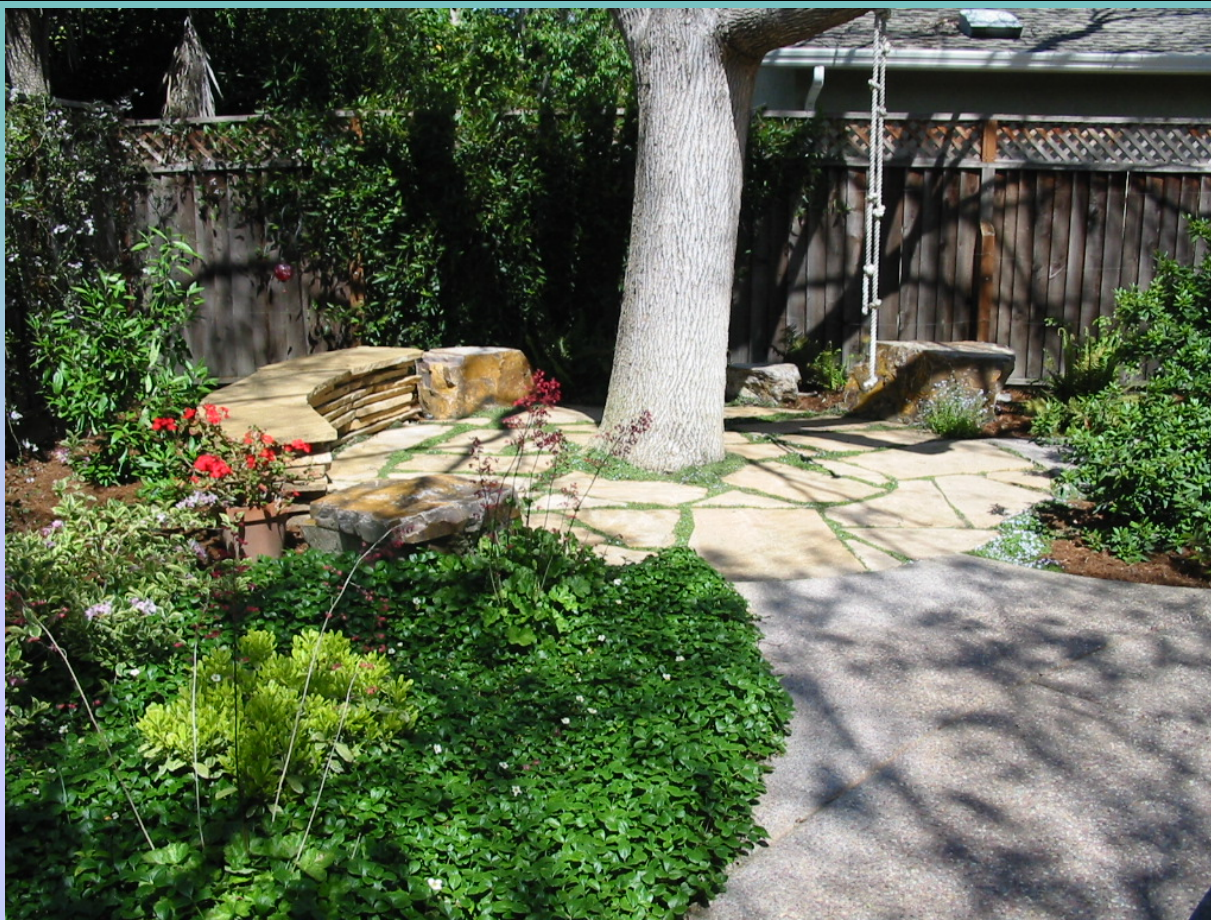


# Riparian and Coastal Plants



**Need Summer Water**





Design: Sherri Osaka Photo: Deva Luna

# Beach Strawberry *Fragaria chiloensis*



Design: Fran Adams Photo: Deva Luna

**Arctostaphylos uva-ursi - Manzanita**  
**Heuchera 'Old La Rochette - Alum Root**



Design & Photo: Sherri Osaka

# Coastal California Lilac

*Ceanothus hearstiorum*



**Wild Ginger**  
***Asarum caudatum***



**Flowering Currant**  
***Ribes sanguineum***

# RESOURCES

[www.goingnativegardentour.org](http://www.goingnativegardentour.org)

**Going Native Garden Tour – April each year**

<https://groups.yahoo.com/group/GardeningWithNatives>

**Yahoo Group – very helpful!**

[www.cnps.org](http://www.cnps.org)

**California Native Plant Society**

[www.cngf.org](http://www.cngf.org)

**California Native Garden Foundation**

Excellent Book:

*Care & Maintenance of Southern California Native Plant Gardens*

**Rancho Santa Ana Botanic Garden**



California natives can be spectacular!!!

