

Lawn Replacement with a Native Garden!

By Deva Luna

My goal in this presentation is to help DIY homeowners who want to replace their imported landscapes and lawns with California native plants, birds and butterflies. I want to stress that this is NOT the same as hiring a professional landscape designer or contractor who has spent decades honing his or her craft. They earn their money and provide a guaranteed product. Also, please don't hire unlicensed operators who aren't insured, bonded or properly trained. They don't pay worker's compensation or disability, and if an accident occurs on your property, you are completely liable for all costs and can even lose your home. 'Nuf said.

Steps for landscape design:

1. Goals
2. Budget
3. Site Analysis
4. Base Map
5. Balloon Diagram
6. Select Plants

Design Concepts

- The rule of odd numbers
- Massing
- Layering
- Repetition
- Contrast
- Function

Try to create year-round interest

Bones: hardscape that is attractive, bold and functional

Bones can also be structural permanent trees and shrubs

Guts: outstanding and beautiful perennials

Skin: ground covers that tie it all together visually

Accents: focal points to draw the eye

Common mistakes:

- The collector's garden (one of everything!) looks a jumble
- Overplanting – learn the mature size of plants
- Not enough contrast between plants – many CA natives have small leaves
- Designing by flower color – flowering is only a fraction of the year
- Not creating conditions for the plants to thrive
- Mixing different hydrozones, so some plants are over or underwatered
- Not maintaining the garden, this gives natives a bad reputation

What do you need for the design?

- Measuring tape(s)
- Ruler (but an architect's scale is easier)
- Large piece of paper (gridded is easier)
- Compass or another way to find north

What does professional landscape design usually cost?

- Typical landscape designer rates are around \$75-\$125/hr
- Landscape architects are higher (usually 10-12% of construction cost)
- Average front yard design costs range from \$1000 to \$2500
- Average backyard design costs range from \$2000 to \$4000

What do I need for the installation?

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| <p>Necessary</p> <ul style="list-style-type: none"> • Plan: 10 examples at City of San Jose website
http://www.sanjoseca.gov/index.aspx?NID=3734 • Gloves (my favorite is Atlas Nitrile Grip) • Shovel • Rake/pitchfork • Wheelbarrow • Pruners (for drip tubing) • Garden hose | <p>Optional</p> <ul style="list-style-type: none"> • Pick to remove shrub roots • Lawnmower or string trimmer • Truck is handy for compost, but it's also deliverable • Plumbing tools, if you are changing your system to drip (pipe wrench, PVC pipe cutter, etc.) • Good friends! |
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What tools do I need? Necessary

- Newspaper or builder's paper
- Free mulch
- Compost
- Plants
- Drip irrigation parts, including a pressure reducer & filter (or a willingness to hand water)

Optional

- Mycorrhizae
 - Compost Tea
 - Purchased mulch
 - Boulders
- Focal elements like bird bath, bench, sculpture, pots

Special instructions if you are landscaping on a slope

- If steep, you may wish to terrace
- Mulch on newspaper just slides off so instead, use a sandwich of shredded redwood bark, jute with 6" sod staples, topped with more bark ("gorilla hair")
- Valves need to be 12" above the highest irrigation lines or have backflow device between water source and valves
- Place emitters above the plant
- Separate zones on the contour, not up and down
- Water the top of hill more than the bottom

Soil testing

- Soil testing is best done as part of the design process.
- Do a simple jar test, and a drainage test

What does professional landscaping cost, in the Bay Area?

- Demo, planting, lawn, irrigation only \$10-12/sft
- Typical yard, softscape & average amount of hardscape \$16 to \$21/sft
- More complex with more hardscape \$32 to \$43/sft & up
- Professional Costs: <http://www.earthcareland.com/what-we-do/installation.html>

Costs, if you do all the work yourself (If you already own or can borrow the tools)

- Plants: \$5-12 each for small plants (4"-1 gallon)
- Mulch: \$33/yd woodchips, \$72/yd bark, \$32/yd arbor chips at Lyngso
- Irrigation: \$250-\$300 includes 2 new valves and timer
- Compost: \$40+/yd, municipal compost is less
- Compost Tea: \$8/gallon, get 3-4 gals. which can be diluted
- Builders paper: \$15 for a 3'x140' roll (doubled covers 200sf)
- Staples \$60/1000, but can get smaller amount
- Sod Cutter rental: \$100 for 2 hours (This is only if you have Bermuda Grass. Rented sod cutters can be temperamental; it's helpful to have two people.)

Sources for materials

Plants

- Capitol Wholesale Nursery – good selection of natives, will sell retail
2938 Everdale Drive, San Jose www.capitolwholesalenursery.com
- Yerba Buena Nursery, now in Half Moon Bay
- Native Revival Nursery – great plants, and other retail items, demo garden
2600 Mar Vista Dr. Aptos, CA 95003 www.nativer revival.com
- California Native Plant Society an annual plant sale, in October, at Hidden Villa

Mycorrhizae

- Capitol Wholesale Nursery, see above
- Most retail nurseries

Compost, Mulch, Boulders & Flagstone for stepping stones

- Lyngso Garden Materials 345 Shoreway Rd, San Carlos, 94070
www.lyngsogarden.com (650) 364-1730
- South Bay Materials 1781 Angela St, San Jose, CA 95125 (408) 977-1855
- U-Save Rockery 589 E Gish Road, San Jose CA 95112
www.usaverockerysanjose.com

Irrigation Parts

- Home Depot & Orchard Supply (be careful of the ½" tubing size!)
- Ewing Irrigation (wholesale/will sell retail) 1735 Rogers Ave, San Jose
www.ewing1.com
- Horizon Irrigation (will sell retail) 1990 Stone Ave, San Jose, CA 95125
www.horizononline.com

Free Arbor Chips

- Use the phone book and start politely calling tree trimming companies
- Lyngso sells (and delivers) cleaned arbor chips, for \$32/yd

Live Compost Tea

- Lyngso Garden Materials (usually on Wednesdays, call ahead)
- Mauby All Natural Brian Debasitis www.mauby.com

Brew your own Compost Tea

- KIS Organics www.kisorganics.com/pages/simplici-tea

Builder's Paper (Don't get the one with waterproofing!!!)

- Lyngso Garden Materials 345 Shoreway Rd, San Carlos, 94070
www.lyngsogarden.com

- Home Depot
- Lessons from EarthCare's *Natural Front Yards* program**
- Sustainable landscaping ideals of material re-use and minimal disruption
 - Affordable lawn replacement using natives in sheet mulch
 - www.naturalfrontyards.com
 - Not for Bermuda or Oxalis (different treatments)

STEP-BY-STEP PROCESS

1. Remove unwanted shrubs
2. Cap off sprinkler system underground
3. Scalp lawn (optional)
4. Cut back edges near hardscape, 4" deep, 18" strip, tapered up to lawn
5. Mound the extra soil in a natural shape
6. Cover everything with 5 layers of newspaper (or 2 layers builder's paper and arbor chips)
7. Plant small plants in planting pockets with mycorrhizae & compost
8. Install drip lines
9. Cover with attractive mulch
10. Spray with compost tea (AACT)

Organic Bermuda Grass control:

1. Water the soil 3 days before removal.
2. Rent a sod-cutter, make two passes (about 1 ½" each) to remove most rhizomes.
3. Remove to the landfill or other location to dry out thoroughly (then reuse the soil)
4. Rototill lightly, and rake out Bermuda
5. Follow up by spot hand weeding anything that re-sprouts

Organic Oxalis (*Oxalis pes-caprae*) control:

I haven't really found any (sigh). Persistent hand pulling before it flowers, for three years. Weeding can be combined with lots of smothering, but will need to replenish paper/cardboard annually. Chickens do eat oxalis.

CALCULATOR: How to calculate how much compost and mulch you need

Bulk materials like compost and mulch are measured in cubic yards.

To figure how many yards you need: Multiply the width by the length to get your square footage. Then multiply that by the number of inches of depth you want.

Then divide by 324. **Example:** to put 4" of mulch on a 20' x 30' area = 600sft
 $4 \times 600 = 2400 / 324 = 7.4 = 7 \frac{1}{2}$ yards.

MAINTENANCE OF A CALIFORNIA NATIVE GARDEN

- Without a 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 add to mulch)
- No pesticides (kills the good bugs and the soil biology)
- Selective shaping; no pruning with a electric hedge shears

Quarterly Maintenance Schedule

Spring

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

Summer

- Keep an eye on irrigation, adjust as necessary
- Watch for pests (Integrated Pest Management)
- 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

Resources

Case study in Santa Monica with comparison costs, plant lists, etc.

<https://www.smgov.net/Departments/OSE/Categories/Landscape/Garden-Garden.aspx>

(just Google Santa Monica garden/garden)

Best book for maintenance (Spanish and English)

Care & Maintenance of Southern California Native Plant Gardens

by Bart O'Brian. Out of print, see if you can find an old one

originally printed by Rancho Santa Ana Botanic Gardens

Books for design

Reimagining the California Lawn (Water-conserving Plants, Practices, and Designs)

Carol Bornstein, David Fross, Bart O'Brien

Designing California Native Gardens

(The Plant Community Approach to Artful, Ecological Gardens)

Glenn Keator and Alrie Middlebrook

To find a certified Green Gardener:

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

To find a landscape professional who specializes in California Natives,
for design, installation or maintenance:

http://landscapestandards.com/index.php?title=California_Native_Plant_Professionals_List

BOTANIC NAME	COMMON NAME	NOTES - this list from Deva Luna
Ground covers for shade		
Asarum caudatum	Wild Ginger	good under redwoods
Oxalis oregana	Redwood Sorrel	good under redwoods
Fragaria vesca	Woodland Strawberry	good under oaks
Fragaria chiloensis	Beach Strawberry	spreads by runners
Ribes viburnifolium	Evergreen Currant	arching, good under oaks
Satureja douglasii	Yerba Buena	fragrant underfoot, under oaks
Mahonia aquifolium repens	Creeping Mahonia	slowly spreads
Salvia spathacea	Hummingbird Sage	can also take sun, fragrant leaves
Perennials for shade		
Aquilegia formosa	Western Columbine	blooms tall, red with yellow
Heuchera maxima	Island Alum Root	vigorous plant, white flowers
Heuchera sanguinea	Coral Bells	several cultivars
Iris douglasiana	Pacific Coast Iris	purple or yellow, strap like leaves
Polystichum munitum	Western Sword Fern	fern for dry areas
Woodwardia fimbriata	Western Chain Fern	tall fern for moister areas
Shrubs that can take part shade		
Carpenteria californica	Island Bush Anemone	white flowers, bright green leaves
Mahonia aquifolium	Oregon Grape	can also be a hedge or screen, fruits
Ribes sanguineum	Pink Flowering Currant	pink flowers followed by fruit, deciduous
Symphoricarpos albus	Snowberry	deciduous
Grass or grass-like		
Juncus patens	Common Rush	sun or shade, hardy
Festuca idahoensis 'Siskyou Blue'	Idaho Fescue	better with water
Festuca californica	California Fescue	tall, can take some shade
Carex tumulicola	Berkeley Sedge	adaptable, sun/shade
Muhlenbergia rigens	Deer Grass	large architectural focal grass
Sisyrinchium bellum 'Rocky Point'	Blue Eyed Grass	small flowering plant for sun

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Ground Covers for sun		
Arctostaphylos edmundsii 'Carmel Sur'	Groundcover Manzanita	better choice than thirsty Arcto. Uva-ursi 'Emerald Carpet'
Baccharis pilularis 'Pigeon Point' or 'Twin Peaks II'	Coyote Bush	can spread far, can be cut back hard
Ceanothus griseus horiz. 'Yankee Point'	California Lilac	can spread 8' in a 3 years
Eriogonum fasciculatum 'Warriner Lytle'	CA Buckwheat	spreads 4', great pollinator
Rhamnus californica 'Sea View'	Dwarf Coffeeberry	difficult to find
Salvia sonomensis or 'Bee's Bliss'	Groundcover Sage	spreads 10' but looks better with annual pruning
Perennials for sun		
Achillea millefolium	Yarrow	typically with white flowers
Artemisia pycnocephala 'David's Choice'	Sandhill Sage	short lived, but lovely feathery grey/blue foliage
Dudleya sp.	Stonecrop	several varieties of succulents
Epilobium 'Calistoga' or 'Everett's Choice'	California Fuchsia	scarlet hummingbird attractor, cut back in fall
Erigeron glaucus 'Wayne Roderick'	Beach Aster	purple flowers
Eriogonum giganteum	Saint Catherine's Lace	5' tall flowering statement
Eriogonum grande var rubescens	Rosy Buckwheat	pink flowers
Eriogonum umbellatum 'Shasta Sulfur'	Sulfur Buckwheat	yellow flowers
Heterotheca villosa 'San Bruno Mountain'	Hairy False Goldenaster	yellow flowers
Mimulus aurantiacus	Monkey Flower	several colors of flowers, looks better with summer water
Monardella villosa	Coyote Mint	purple flowers

Penstemon heterophyllus 'Margarita BOP'	Foothill Penstemon	purple/blue flowers, cut back after bloom
Salvia 'Winnifred Gilman'	Sage	3'-5' fragrant sage, deep color flower
Verbena lilacina 'De la Mina'	Cedros Island Verbena	long-blooming purple flowers

Shrubs for sun

Arctostaphylos densiflora 'Howard McMinn'	Manzanita	Garden adaptable, 3'-5' tall, takes pruning easily
Arctostaphylos bakeri 'Louis Edmunds'	Manzanita	medium size, upright specimen
Arctostaphylos pajaroensis 'Paradise'	Manzanita	spreading wide
Artemisia californica	California Sagebrush	fragrant leaf, can take pruning or it becomes shaggy
Ceanothus thyrsiflorus 'Skylark'	California Lilac	spring bloom, blue
Ceanothus 'Dark Star'	California Lilac	spring bloom, blue
Galvezia speciosa	Island Bush Snapdragon	arching, red flowers, hummingbirds
Rhamnus californica 'Eve Case'	Coffeeberry	looks good year-round, berries for birds

BOTANIC NAME**COMMON NAME****NOTES - this list from Deva Luna****Tall shrubs for screening**

Heteromeles arbutifolia	Toyon	white flowers, red berries, usually multi-trunk
Myrica californica	Wax Myrtle	can be sheared or small tree (12'-20')
Prunus illicifolia or lyonii	Hollyleaf Cherry	makes a tall hedge or small tree, fruits

Trees

Acer circinatum	Vine Maple	native substitute for Japanese Maple, typically multi-trunk
Acer macrophyllum	Big Leaf Maple	tall, fast growing deciduous local maple
Aesculus californica	Buckeye	beautiful flowers, bark and fruits, can loose leaves in late summer in response to drought
Arctostaphylos 'Dr. Hurd'	"Dr. Hurd" Manzanita	awesome bark & structure, 12' x 12'
Ceanothus 'Ray Hartman'	California Lilac	one of the largest Ceanothus; available pruned as a tree
Cercis occidentalis	Western Redbud	multi-trunk tree, typically, pink flowers in spring
Quercus agrifolia	Coast Live Oak	Local, dense evergreen oak
Quercus lobata	Valley Oak	Large fast-growing deciduous oak
Sambucus mexicana	Elderberry	fast growing, multi-trunk tree, edible blue berries
x Chitalpa tashkentensis	Chitalpa	fast, deciduous hybrid (between Catalpa and Desert Willow) with showy flowers

Possible espaliers or on trellis

Garrya elliptica 'James Roof'	Silk Tassel	Willow branches can be espaliered
Ceanothus 'Yankee Point'	California Lilac	Usually 8' wide, this can be pruned narrow and 8' high
Ribes viburnifolium	Evergreen Currant	A reasonable size "vine" for a fence in part shade