LAWN REMOVAL &

NATIVE GARDEN INSTALLATION

Deva Luna   EarthCare Landscaping   408-871-2792
This is one of 3 plans found on the native plant nursery site for Yerba Buena Nursery

www.yerbabuenanursery.com on the right side of the home page

“Lawn Alternatives using California Native Plants”

A - Achillea millefolium
E - Epilobium canum
(grass) - Festuca 'Siskiyou Blue'
I - Iris douglasiana
P - Penstemon heterophyllus 'Margarita BOP'
SS - Solidago sp.
Café Garden (Small, Sunny Yard)
Sustainable concept design for yards in Santa Clara Valley

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.

What does professional landscape design 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

Professional Costs: 
http://www.earthcareland.com/what-we-do/installation.html
Steps for Landscape Design

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

- **Garage**
- **Driveway**
- **Porch**
- **View window**

- **North**

- **Downspout**

- **Poor drainage, slopes to house**

- **Sewer cleanout**

- **Very hot afternoon sun on the house**

- **Need to screen neighbor’s RV**

- **Need new fence & path to backyard**

- **Nothing ever grows well here**
- **Garage**
- **Driveway**
  - **Divert downspout**
  - **Increase path for access to car**
  - **5’ tall accent plant**
  - **Colorful perennials**
  - **Hide sewer cover**
- **View window**
- **Porch**
  - **Path to backyard**
  - **Something pretty here**
- **Screening shrub(s)**
  - **Possible mound here with deciduous shade tree**

**Conceptual Diagram Example**

- **North**
Common mistakes

- The collector’s garden (one of everything!)
- Overplanting
- Not enough contrast between plants
- Designing by flower color (needs “bones”)
- Not creating conditions for the plants to thrive
- Mixing different hydrozones
- Not maintaining the garden
Leaf texture contrast is important

GOOD CONTRAST

POOR CONTRAST

Drawn by Fran Adams
Design Concepts

- The rule of odd numbers
- Massing
- Layering
- Repetition
- Contrast
- Function
Texture, massing, repetition
Massing, repetition, layering
Textural contrast & massing
Structure & texture
Structure
Hydrozoning

Photo: Carol Bornstein
BONES:
Hardscape that is attractive, bold and functional
BONES:
Contemporary retaining wall

Native Horsetail (keep contained!)
BONES can also be plants with good structure

Dr. Hurd Manzanita
GUTS:
Outstanding and hard working perennials

Cedros Island Verbena & Poppies
SKIN:
Ground covers that tie it all together visually

Green Supreme Manzanita & Pt. Sal Spreader Sage
ACCENTS:
Focal points to draw the eye
Try to create year-round interest
Spring

Douglas Iris & Alum Root
Summer

Autumn Sage & Beach Aster
CA Fuchsia & Deer Grass

Fall
Winter textures
Cleveland Sage & Deer Grass
DIY Installation FAQs

- How long will this take? *(That depends on your time and skill)*
- When’s the best time to install? *(Fall is best, but anytime is possible)*
- Can my regular gardener maintain it? *(Yes, with training. I recommend the Green Gardener Program)*
- How to transition to drip *(tutorial)*
- How do you decide what is worth keeping? *(Love it? Serves a function well vs. it’s diseased, ugly, or in the wrong place.)*
- How do you remove shrubs and trees? *(Hard labor with a saw, pick, shovel and possibly a stump grinder)*
- Where do I get materials? *(list to be provided)*
- How big is 10 yards of free mulch? *(It will fill ½ your driveway)*
- How do I calculate yards of mulch or compost? *(Contractor math)*
What tools do I need?

NECESSARY
• Plan
• Gloves (favorite is Atlas Nitrile Grip)
• Shovel
• Rake/pitchfork
• Wheelbarrow
• Pruners (for drip tubing)
• Garden hose

OPTIONAL
• 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!
What materials 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, pots
SOIL TESTS

- Profile (dig a hole)
- Composition (simple tests)
- pH (simple home test kit)
- Drainage (Percolation/hole test)
- Fertility (professional lab)
- Biology (professional lab)
Fill a jar 1/3 full of soil, 2/3 water
Shake well
Draw lines on the jar at different time points, don’t disturb

After 1 minute – sand settles out
After 1 hour – silt
After 2 days – clay
Organic material floats to the top

Simple, at home test for soil texture (sand/silt/clay)
RIBBON TEST

- Moisten a bit of soil in your hand and knead it to remove dry clumps
- Squeeze a ribbon upwards between your thumb and fingers
- Stand it upright as you push it out.
- Measure where it breaks off
- 1” sand
- 2” silt
- 3” clay
Percolation Test

Dig a hole and prefill it if the soil is dry
Fill your hole with water
Measure how fast it drains. This Oakland soil drained 2 ½” per hour. Clay soil might drain at only ¼” per hour.
Chemical testing for soil fertility, pH, and more

• Master Gardeners of Santa Clara County has a list of labs
  (Univ. of Mass. is the least expensive)
  • http://www.mastergardeners.org/pdf/import/resources/Soil_testing_laboratory_list.pdf

Biological testing for fungi, bacteria, nematodes

• Botanical Arts    Alane Weber  650-348-2094
• Mauby All Natural  Brian Debasitis  www.mauby.com
• Soil Foodweb Intl. Dr. Elaine Ingham  www.soilfoodweb.com
Healthy Soil

(Feed the soil, not the plants)

- Organic fertilizers
- Mycorrhizae
- Compost
- AACT (Aerobically activated compost tea)
- Sheet Mulch
- Electric blower, just for paths
Home brewing in our office bathroom!
## What does professional landscaping cost?

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demo, planting, lawn, irrigation only</td>
<td>$8 to $10/sft</td>
</tr>
<tr>
<td>Typical yard, softscape &amp; average amount of hardscape</td>
<td>$13 to $18.5/sft</td>
</tr>
<tr>
<td>More complex with more hardscape</td>
<td>$27 to $39/sft &amp; up</td>
</tr>
</tbody>
</table>


Do not use unlicensed operators; they put your home at risk by carrying no insurance. They put trained, bonded, licensed professionals who carry worker’s compensation for their employees, out of work.
Costs, if you do all the work yourself

Assuming you already own or can borrow the tools

- **Plants:** $5-12 each for small plants (4”-1 gallon)
- **Mulch:** $33/yard woodchips, $73/yard firbark, $32/yard arbor chips at Lyngso (also can get free)
- **Irrigation:** $250-$300 includes 2 new valves and timer
- **Compost:** $40+/yard, municipal compost is less
- **Compost Tea:** $8/gallon, get 3-4 gals. which can be diluted
- **Builders paper:** $15/3’x140’ roll (doubled covers 200sft)
- **Staples** $60/1000, but can get smaller amount
- **Sod Cutter rental:** $100 for 2 hours (This is only if you have Bermuda Grass. They can be temperamental.)
Sources for material

Plants
• Capitol Wholesale Nursery – good selection of natives, will sell retail
  2938 Everdale Drive, San Jose  www.capitolwholesalenursery.com
• Native Revival Nursery – great plants, and other retail items, demonstration garden
  2600 Mar Vista Dr. Aptos, CA 95003  www.nativerevival.com
• California Native Plant Society has member plant sales all year, for the public 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
• Mountain View Garden Center 50 Centre St., Mountain View www.mountainviewgardencenter.com
• 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
Sources for material

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) arbor chips, for $32/yd

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

Builder’s Paper (Don’t get the one with waterproofing!!!)
Lyngso Garden Materials 345 Shoreway Rd, San Carlos, 94070 www.lyngsogarden.com
Home Depot
HELP WITH HYDROZONING!

www.waterwonk.us
Search for a category

**Example:** very low native trees
## Results for “Very Low Trees”
Click on “See it” for a picture!

<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>S T</td>
<td>Adenanthera pavonina</td>
<td>red shanks/ribbonwood</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Asclepias syriaca</td>
<td>California buckeye</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>S T</td>
<td>Arctostaphylos glauca</td>
<td>big berry manzanita</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Arctostaphylos manzanita</td>
<td>common manzanita</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Cercis occidentalis</td>
<td>western redbud</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Chilopsis linearis</td>
<td>desert willow</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>S T</td>
<td>Cotoneaster horizontalis</td>
<td>sumac</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Cupressus macdougalensis</td>
<td>MacNab cypress</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Cupressus stephensiensis</td>
<td>Cuyamaca cypress</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Parkinsonia floribunda</td>
<td>blue palo verde</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Parkinsonia microphylla</td>
<td>little leaf palo verde</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Pinus attenuata</td>
<td>knobcone pine</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Pinus longaeva</td>
<td>bristlecone pine</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Pinus ponderosa</td>
<td>ponderosa pine</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Pinus sabina</td>
<td>foothill pine</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Quercus agrifolia</td>
<td>coast live oak</td>
<td>Very Low</td>
<td>See it</td>
</tr>
<tr>
<td>T</td>
<td>Quercus chrysolepis</td>
<td>canyon live oak</td>
<td>Very Low</td>
<td>See it</td>
</tr>
</tbody>
</table>

Note: For more detailed information, click on “See it”.
Cercis occidentalis – Western Redbud
Search for a plant and find out its water requirement.
LESSONS FROM “NATURAL FRONT YARDS”

- Sustainable landscaping ideals of material re-use and minimal disruption
- Affordable lawn replacement using natives in sheet mulch
- www.naturalfrontyards.com
AFTER

“Natural Front Yards”
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
5. Mound extra soil
6. Cover with 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)
1. Water the soil 3 days before removal.

2. Rent a sod-cutter, make two passes (about 1 ½” each) to remove most of the rhizomes.

3. Remove to the landfill or other location to dry out thoroughly (then you can reuse the soil)

4. Rototill lightly, and rake out Bermuda

5. Follow up by spot hand weeding anything that re-sprouts
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

Oxalis pes-caprae
Chickens do eat Oxalis!
Scalped lawn
Usually there will be existing plants to keep.
Cut back the edges near hardscape
Cut back the edges and make a mound with the extra soil.
How to shape a mound

Steep sides look unnatural

Make one point higher

Gradually taper the edges into the earth

Too regular

More natural
MAKE ONE END HIGHER
PERHAPS ADD BOULDERS
Examples of natural looking mounds
Front yard with extensive mounding
Smother grass with paper
Examples of organic mulch

- Free arbor chips
- ¾” fir bark
- Wood chips
CALCULATOR: Bulk materials like compost and mulch are measured in cubic yards.

To figure how many yards you need:
Square foot coverage (width x length) X number of inches of depth. Then divide by 324.

Example: to put 4” of mulch on a 20’ x 30’ area = 600sft
4 x 600 = 2400 / 324 = 7.4 = 7 ½ yards.
Delivery of “Arbor Chips” on top of paper
Space plants for ultimate growth
Planting “pocket” in mulch
Scuff or open root balls, 
Add mycorrhizae
Drip irrigation
Expandable drip irrigation
valve
filter
pressure reducer
tubing
connectors
sch. 80 pipe
gate valve
1/2" poly tubing

How it goes together
Change your sprinklers to drip

- Turn off irrigation system and separate the valves from the pipes
- Unscrew the sprinklers, leaving the pipes in the ground
- To make sprinkler valves suitable for drip, add a 30psi pressure reducer and a filter to each one. They need to be 12” above the highest point of the system, on schedule 80 pipe. Use teflon tape on threads.
- Connect ½” drip lines to the valves and snake them around the yard. Make sure your .710 or .620 tubing matches your compression fittings (Raindrip is the smaller one)
- After you plant, add ¼” tubes with a barb to each plant. Use a hole punch
- Connect a length of ¼” tubing that has emitters every 6 or 12”, add an end plug. Spiral it around the plant and stake it in place.
- Flush your system, cap the end and test your system.
Slopes

- 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, and more bark
- 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
Dry creek rough grading
Plants laid out with dry creek
Dry creek and two colors of mulch
Natural Front Yard one year after planting
Six months later
Newly planted Oct. ‘09
Natural Front Yard two years after planting
Same yard three years after planting
Large lawn in front yard
Newly planted
18 months later
Some of my favorite native plants...
Great low water spreaders

Avoid narrow planting areas, if possible
DWARF COYOTE BUSH

*Baccharis pillularis* ‘Twin Peaks’
Yankee Point California Lilac
Ceanothus griseus horizontalis ‘Yankee Point’
Ground Cover Native **Sage**

*Salvia ‘Bee’s Bliss’*
Hummingbird Sage
Salvia spathacea
Evergreen Currant
Ribes viburnifolium
Dramatic accent grass

Deer Grass – *Muhlenbergia rigens*
Dry shade combo

Douglas Iris & Alum Root

*Iris douglasii & Heuchera maxima*
A reasonable sized plant for a trellis

Catalina Perfume – *Ribes viburnifolium*
Tall bushy screening

Toyon & Wax Myrtle

*Heteromeles arbutifolia & Myrica californica*
Reliable low groundcover  
(better than Emerald Carpet)

Carmel Sur Manzanita  
*Arctostaphylos edmundsii ‘Carmel Sur’*
Evergreen, 2’ high ground cover

Coffeeberry *Rhamnus ‘Seaview Improved’*
No water once established - Buckwheats

Eriogonum arborescens

Eriogonum giganteum

E. grande rubescens

E. Umbellatum var.polyanthum 'Shasta Sulfur'
No water once established - Sages

Salvia clevelandii

Salvia spathacea

Salvia ‘Dara’s Choice’

Salvia mellifera
Cedros Island Verbena
*Verbena lilacina 'De La Mina'*

Blooms a long time
Blooms late summer into fall

California Fuchsia (*Epilobium* – low forms)
Different Kind of Maintenance

- 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 an electric hedge shear

Best book for maintenance (Spanish and English)

_Care & Maintenance of Southern California Native Plant Gardens_
by Bart O’Brien. $30 out of print from Rancho Santa Ana Botanic Gardens

- Find a Green Gardener:
  [http://www.mywatershedwatch.org/findgardener.html](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
START WITH THE END IN MIND