SECRETS OF

DROUGHT TOLERANT LANDSCAPING

Deva Luna EarthCare Landscaping 408-871-2792

WHY DO WE CARE?

- Water may be our next “limiting factor”
- Drought is always a reality for California
- 18% of CA’s energy use is for water, so water is tied to global warming and peak oil
- 60% of our fresh water goes to landscaping, lawns being the largest part of that

BASICS

- Lawn reduction or replacement
- Resilient, living soil
- Appropriate plants
- Separate hydrozones
- Irrigation types & timing
- Mulch

ADVANCED

- Rainwater harvesting
- Swales
- Pervious surfaces
- Graywater irrigation

SANTA MONICA DEMONSTRATION

Conventional Landscaping

California Natives

CONVENTIONAL GARDEN ESTABLISHED

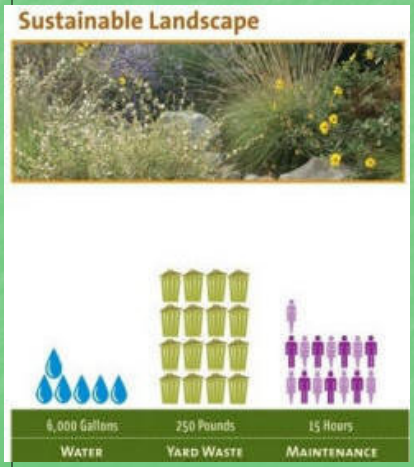
CALIFORNIA NATIVE GARDEN ESTABLISHED

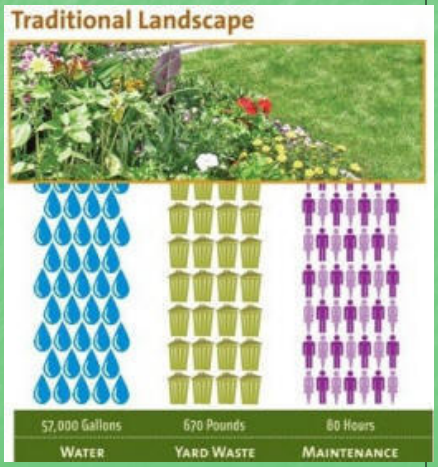
California Natives compared to Conventional:

- 1/10 of the water
- ¼ of the maintenance labor
- 3/5 of the green waste
- Increased habitat
- Lowered pollution

To view online:
http://www.smgov.net/Departments/OSE/Categories/Landscape/Demonstration_Gardens.aspx

Annual Comparison





LAWNS

- Turf is the largest water user
- Reduce size to what you really use
- Rebates available (up to $3000) with a *Water Wise House Call* - free water assessment - www.valleywater.org
- Replace with ground covers, herbal lawns, meadows, paths, low shrubs, etc.
- EarthCare's low cost lawn replacement: www.naturalfrontyards.com

LAWN CARE

- Increase watering intervals
- Monitor controller often (or get ET "smart" controller)
- Fix leaks, check for overspray
- Mow high
- Use organic fertilizers and topdress with compost annually (slower, healthier)
- Grass-cycle
- Spray with compost tea for deep roots

Lawn alternative: Carex pansa

Design: Agi Kehoe

Installation: EarthCare Landscaping

Lawn alternative: Eco-lawn

Eco-Lawn Close-ups

Design: Agi Kehoe Photo: Deva Luna

Lawn alternative: Meadow with wildflowers

THE RIGHT PLANTS

Drought tolerant plants use different strategies

- grey or fuzzy leaves (lavender, lamb's ear)
- waxy or fleshy water-holding leaves (succulents)
- bulbs for storage underground (iris)
- deep rooting (manzanita, persimmon)
- dormancy (buckeye, monkeyflower)

Photo: Deva Luna

Design: Patricia St. John, Installation: EarthCare Landscaping

Photo and Design: Stephanie Morris, Installation: EarthCare Landscaping

HYDROZONE

Separate plants by water requirements – "Like with like"

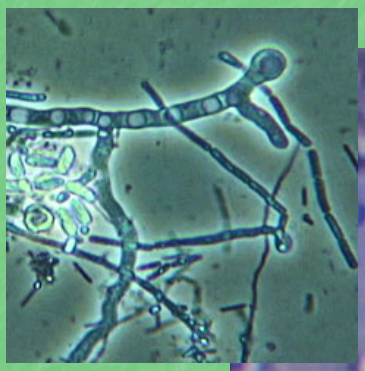
- Keep lush, high-maintenance, water-lovers in small areas close to the house
- Plants that can transition away from artificial irrigation
- Turf on separate valve
- Fruit trees on separate valve

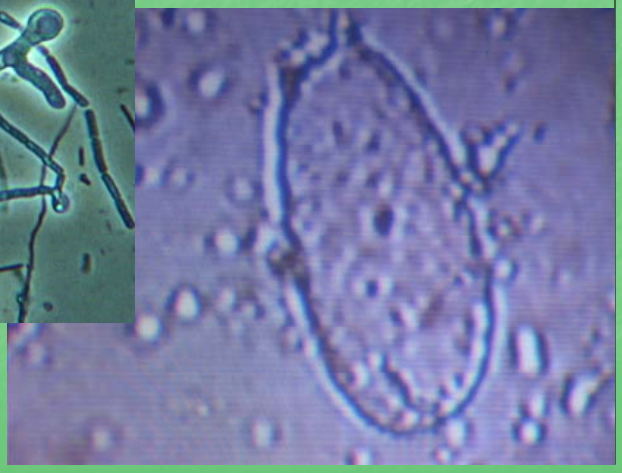
RESILIENT SOIL

A biologically alive soil holds water well

- Add organic matter (compost)
- AACT (Actively Aerated Compost Tea) purchase at Lyngso Garden Materials
- 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

LIVING SOIL





WATERING

After plants are established:

- Water <u>infrequently but deeply</u>
- Allow soil surface to dry out (check!)
- Increase the intervals between watering
- Hand watering is okay
- Don't use the % feature on the timer

DRIP VS. SPRAY

- Drip is measured in gallons per HOUR
- Spray is measured in gallons per MINUTE
- Therefore drip needs to be on LONGER, but less often
- Never put drip and spray on the same line

SMART CONTROLLERS

Also called “ET” (evapotranspiration) or weather- based controllers

- Connected to a satellite, receives local weather updates and automatically adjusts
- Monthly fee
- Rebates from SCV Water District
- Many brands

MULCH

- Wood chips, not plastic
- Protects the soil from drying out
- Decomposes and improves soil
- Vibrant biology just underneath
- Suppress weeds
- Can get free “arbor chips”

Three kinds of mulch

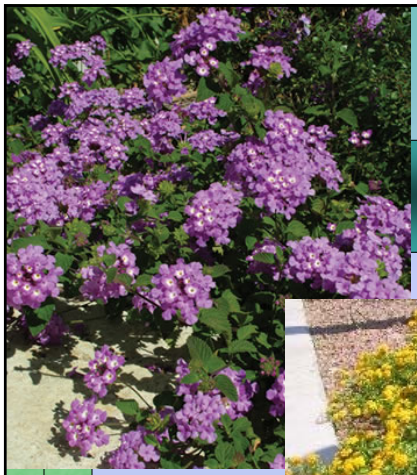
Define paths with different colors of mulch

A few favorite spreading drought tolerant

GROUND COVERS

Design: Fran Adams Photo: Deva Luna

Rosemary & Dwarf Coyote Bush



Lantana

Design: Sherri Osaka Photo: Deva Luna

Beach Strawberry Ground Cover

Design & Photo: Sherri Osaka Installation: EarthCare Landscaping

Ceanothus ~ California Lilac

Salvia ‘Bee’s Bliss’

Design: Stephanie Morris Installation: Curtis Horticulture

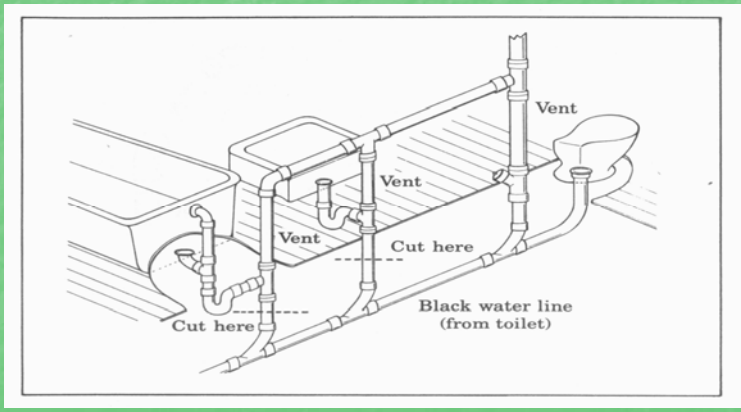
KEEP YOUR WATER ON SITE

- Downspouts to drywells, dry creeks or rain barrels
- Swales (contour lines of slopes)
- Pervious surfaces - no run-off

GRAYWATER
Laundry to Landscape

MULCH BASINS

Retrofitting for Graywater
Step 1: Separate black and gray water



Drawing from: *Gray Water Use in the Landscape* by Robert Kourik, 1988

Lawn Irrigation Installation

Photos from ReWater, Inc.

Lawn five years after installation

Rain Barrels

Permeable Hardscape

Decomposed granite path

Gravel used as mulch

Installation: EarthCare Landscaping

PERVIOUS CONCRETE

Remember “garden / garden”?

The choice is yours!

RESOURCES

www.naturalfrontyards.com
EarthCare’s low-cost front lawn replacement

www.goingnativegardentour.org
Going Native Garden Tour – April 18, 2010

www.cnps.org
California Native Plant Society

www.yerbabuenanursery.com
Yerba Buena Demonstration Garden

www.cngf.org
California Native Garden Foundation

www.landscapestandards.com
A wiki site for Sustainable Landscaping with lists of professionals and pictures

THE END

Secrets of Drought Tolerant Landscaping

Deva Luna ~ EarthCare Landscaping ~ 408-871-2792

Background

- Water may be the next "oil" - finite amount of water, projected population growth
- We currently get our water from rain (14"/year), ground pumping, reservoirs (rivers from snow in the mountains), Delta, State water project aqueducts (85% reduction in supplies already announced)
- 18% of all energy use in California is for transporting & treating water!
- Up to 60% of our water is used in landscaping, lawns use most of that

Lawn care

- Water audit (free "Water Wise House Call" from www.valleywater.org)
- Best Management Practices, such as fixing leaks, setting timers properly, checking for overspray, mowing high, grass-cycling, increasing watering intervals, aeration, adding compost & compost tea

Lawn replacement

- Reduce size to what you really use (even to zero) – rebates available
- Ground covers, meadows, herbal lawns, paths, low shrubs, etc.
- For professional help www.landscapestandards.com "CA native plant professionals"
- EarthCare's "Natural Front Yards", Middlebrook's "Lose the Lawn"

Plant choices

- CA Natives & Mediterraneans, adapted to our climate without irrigation
- Hydrozoning – put plants with similar water needs together

Improve the soil – makes plants more healthy so they can tolerate drought

- Feed the Soil Foodweb compost, AACT compost tea,
- Don't compact the soil by digging when soggy
- Don't poison the biology with pesticides, herbicides & chemical fertilizers

Fertilize organically (or not at all) – slower growing plants use less water

Thanks for coming to my talk! **Deva Luna, Garden Coach**

Secrets of Drought Tolerant Landscaping

Irrigation types and timing

- Drip vs. spray, longer & less often. Hand watering is okay- you pay attention.
- Early morning vs. hot windy afternoons
- After plants are established, water infrequently but deeply. Let surface dry out to encourage deeper rooting, increase intervals. Don't use the % feature on the timer
- "Smart" controllers are weather based, connected to a satellite

Mulch – moisture stays in soil, decomposes to improve soil, suppress weeds, can get free "arbor chips"

Permeable surfaces – Direct downspouts to soil or drywells, not to sewers

- Pervious concrete www.prettypervious.com,
- Decomposed granite and gravel
- Permeable pavers

Practices that will become more common in the future

- Greywater re-use
- Water catchment

Resources

Santa Monica comparison demonstration garden/garden
http://www.smgov.net/Departments/OSE/Categories/Landscape/Demonstration_Gardens.aspx

EarthCare Landscaping's low-cost front lawn replacement www.naturalfrontyards.com

Going Native Garden Tour – April each year www.goingnativegardentour.org

Yerba Buena Demonstration Garden www.yerbabuenanursery.com

Freshly brewed compost tea at Lyngso Garden Materials www.lyngsogarden.com

A wiki site for Sustainable Landscaping with lists of professionals and pictures:
www.landscapestandards.com

Master Gardeners of Santa Clara County http://www.mastergardeners.org/scc.html

Lovely book for droughty plants (with pictures!): *Plants and Landscapes for Summer Dry Climates*, East Bay Municipal Utility District

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