Fundamentals of Water-wise Gardening

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Sponsored by City of Mountain View and BAWSCA (Bay Area Water Supply & Conservation Agency)

Lawns: reduce size to what you really use, or replace with ground covers, herbal lawns, meadows, paths, seating areas, low shrubs, etc. Rebates available (up to $3000) with a *Water Wise House Call* - free water assessment - www.valleywater.org.

Care of lawns: mow high, grass-cycle, top dress with compost and compost tea, use organic fertilizers, increase watering intervals, check controller timing often.

Resilient, living soil holds more water and has better percolation. Add compost, compost tea, avoid spraying chemicals or tilling and mulch!

Mulch protects soil, improves fertility, supresses weeds, improves the soil biology, and can be free!

Swales slow and capture water on site. Create them on the contour. Could be a dry creek.

The right plants: natives, Mediteraneans, succulents, and other drought tolerant plants like Ceanothus, Manzanita, Sage, Lavender, New Zealand Flax, and Lantana.

Hydrozones: group and irrigate plants with similar watering needs

Irrigation: change from spray to drip, water infrequently but deeply, check soil moisture and allow the surface to dry out, avoid the % feature on the controller. Check for leaks and overspray. Consider a smart (ET) controller or water sensor.

Rainwater Harvesting : plenty from the roof, but how much can you store ? Best quality irrigation water.

Greywater re-use is practical because it's generated all year. Need to use special bio-compatible soaps and cleaners. Flush salts out with the winter rains. Laundry to landscape easiest/ no permit necessary.

Pervious surfaces allow you to keep all your rainwater on site (no run-off to the Bay). Decomposed granite (DG or gold fines), gravel , mulch or pervious concrete.

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

Going Native Garden Tour – April www.goingnativegardentour.org

Yerba Buena Demonstration Garden www.yerbabuenanursery.com

A local web site for Sustainable Landscaping with lists of professionals and pictures

www.landscapestandards.com

Comparison of traditional and native landscaping in Santa Monica (garden/garden):

http://www.smgov.net/Departments/OSE/Categories/Landscape/Garden-Garden.aspx

FUNDAMENTALS

OF WATER-WISE GARDENING

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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:

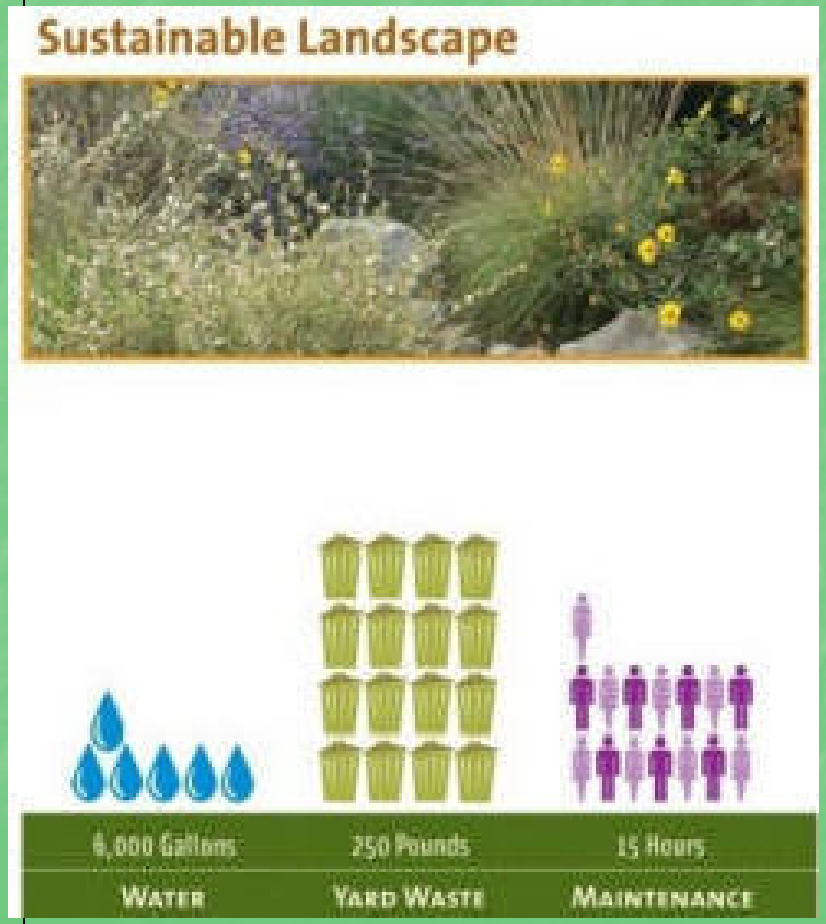
- 1/10 of the water

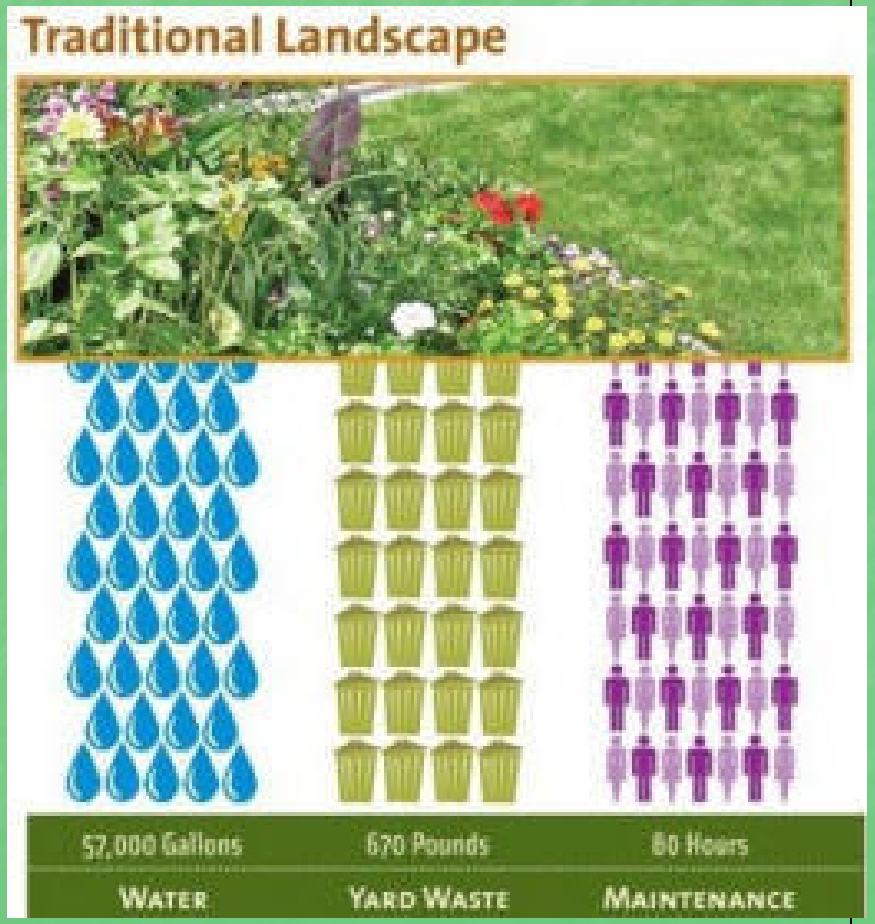
- ¼ of the maintenance labor
- 3/5 of the green waste

- 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: Sherri Osaka, Installation: EarthCare Landscaping

Design: Stephanie Morris, Installation: EarthCare Landscaping

HYDROZONE

Separate plants by water requirements – "Like with like"

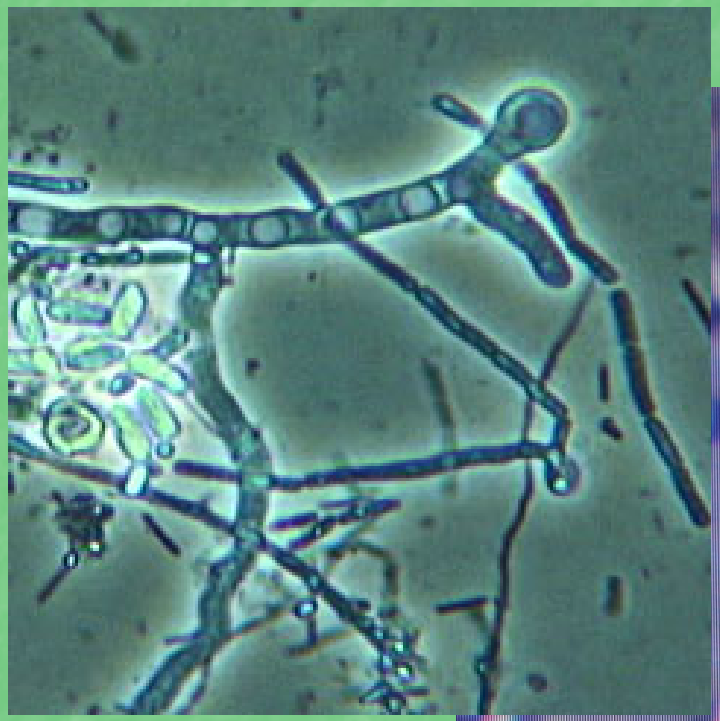
- Keep lush, high-maintenance, water-lovers in small areas close to the house
- Plants that can transition away from artificial irrigation
- Turf on separate valve
- Fruit trees on separate valve

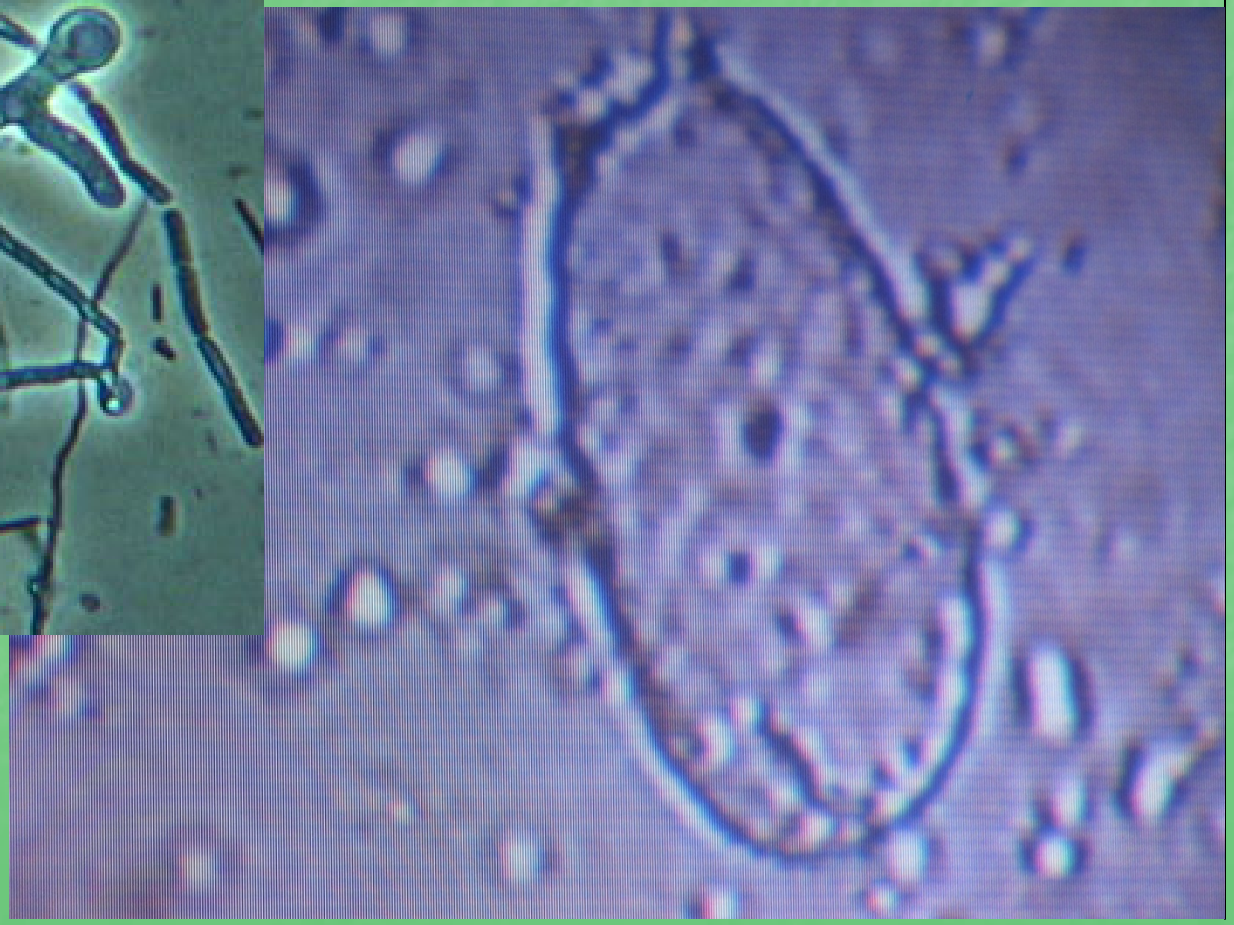
RESILIENT SOIL

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

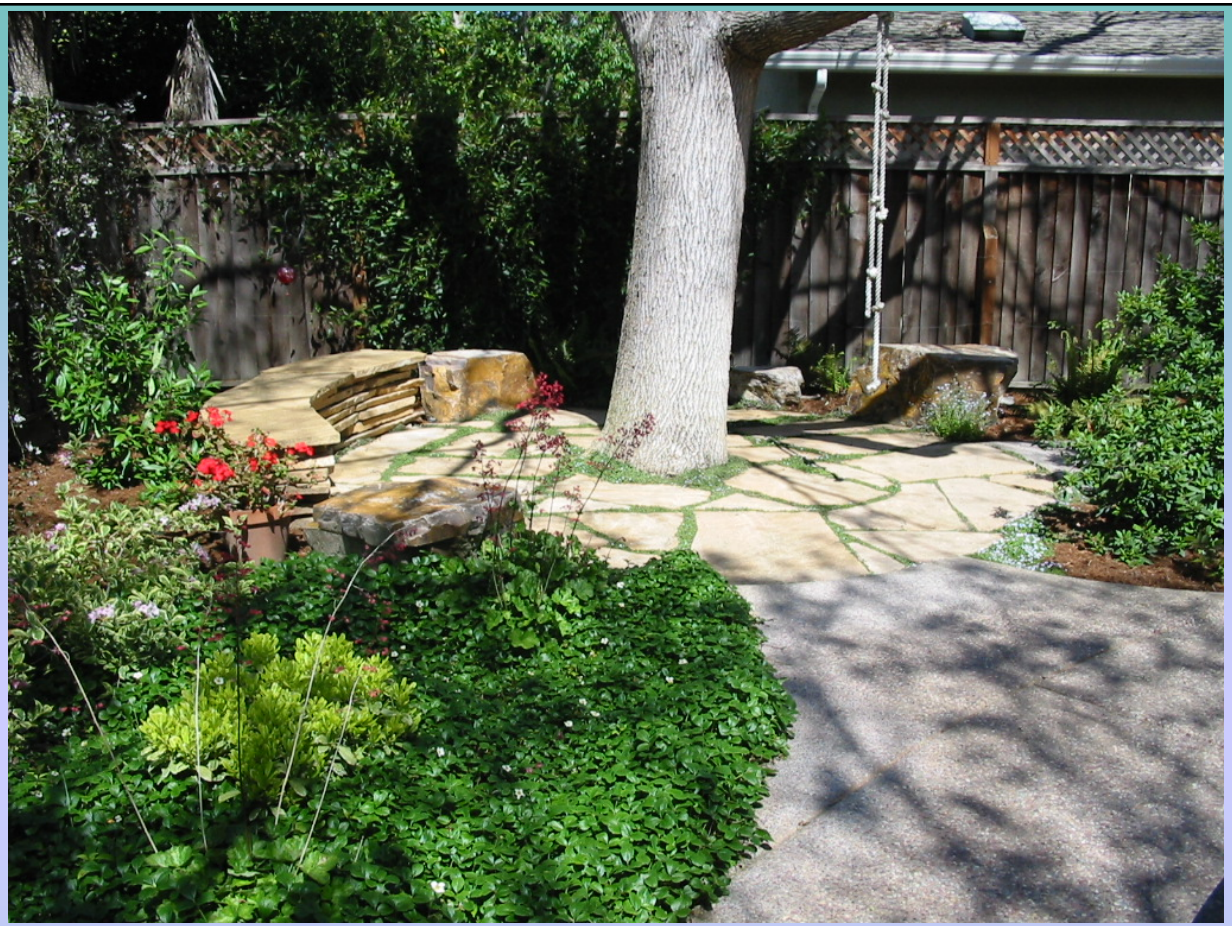
A few favorite spreading drought tolerant GROUND COVERS

Design: Fran Adams Photo: Deva Luna

Manzanita (Arctostaphylos)

Salvia ‘Bee’s Bliss’

Design: Stephanie Morris Installation: Curtis Horticulture



Design: Sherri Osaka Photo: Deva Luna

Beach Strawberry Ground Cover

Design & Photo: Sherri Osaka Installation: EarthCare Landscaping

Ceanothus ~ California Lilac

KEEP YOUR WATER ON SITE

- Downspouts to drywells, dry creeks or rain barrels

- Swales (contour lines of slopes)

- Pervious surfaces - no run-off

Permeable Hardscape

Pavers set in sand

Decomposed granite path

Photo & Design: Deva Luna

Gravel used as mulch

Installation: EarthCare Landscaping

PERVIOUS CONCRETE

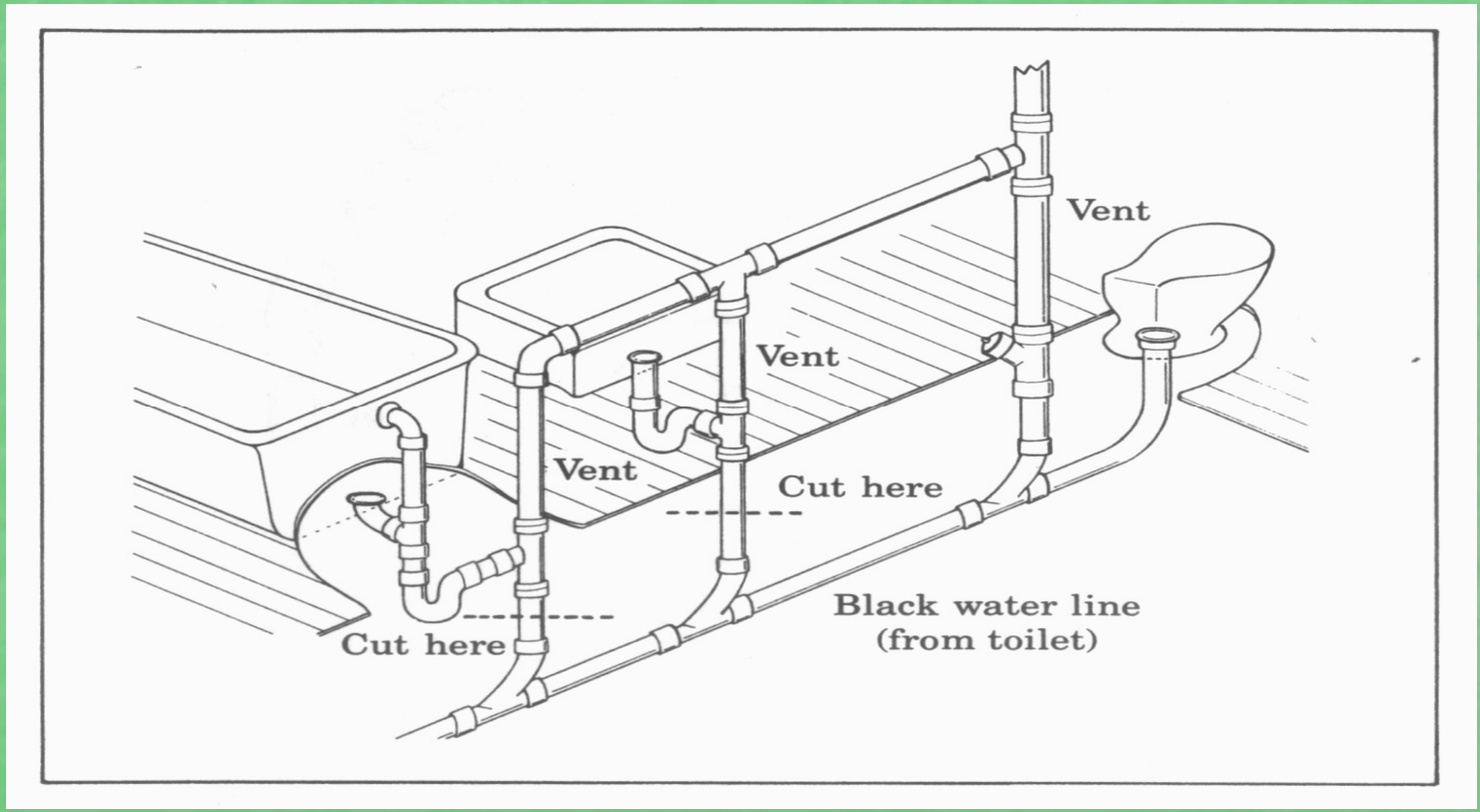
Swales slow & capture water

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

Larger Rain Storage

Daisy chain barrels

www.rainwaterpillow.com

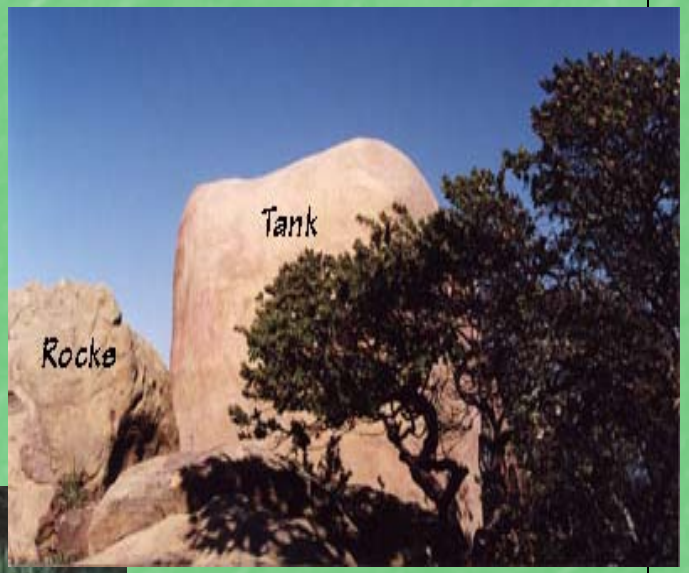


Photo courtesy of EarthCraft Design

Remember “garden / garden”?

The choice is yours!

RESOURCES

www.naturalfrontyards.com
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www.goingnativegardentour.org
Going Native Garden Tour – April

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