

Creating Mediterranean Style, Water-Saving Gardens

Created by Noelle Marquis, Regenerative Landscaping
415-485-4907 noellemarquis@gmail.com

Mediterranean climate: characterized by dry, sunny summers and winter rains. This weather pattern occurs in California, the region surrounding the Mediterranean Sea, South Africa, Chile, and parts of Australia. Plants native to these areas tend to be well suited to our California climate.

Mediterranean garden style: This class will focus on achieving the look and feel of the villa gardens of the region surrounding the Mediterranean Sea,

Characteristics of Mediterranean garden style:

stone and earthy plaster hard-scapes,

small, fine textured foliage, often in grayish hues or leathery leaves with light, fuzzy undersides as an adaptation to dry summers (eg. Olive trees, rosemary, feijoa, santolina)

brightly colored flowers (bougainvillea, rockrose, tagetes, aloe, pomegranate)

Vegetables and edible trees inter-planted with ornamentals, close to the house for easy harvest and watering. (think fig, olive, citrus, pomegranate, grape vines!)

Water Features- even the sound of a tiny trickling fountain can sooth and refresh the senses in the hot summer (and enhance habitat for birds and butterflies)

Formal geometry and Axial design characteristic of historic Mediterranean villa gardens- clipped hedges

Lawns absent or insignificant

Garden accents such as painted tile (blue is a predominant color) mosaics, wrought iron features, terra cotta pots/olive jars, statuary

Tips for creating a Mediterranean look

Create CONTRAST

- Contrasting textures eg. Hard structured surfaces with soft, unstructured foliage& blooms (climbing and cascading plants over stone walls, etc)
- Vertical & horizontal contrast- tall cypress trees (juniper and aborvitae also good in this climate)
- Contrasting foliage- smooth goes with spikey, fine texture with bold architectural forms

- Shade vs. sun- create areas of respite from sun with pergolas or shaded trellises (deciduous trees or vines allow winter sun but provide relief from summer heat) and other areas of open, sweeping views

Incorporate Stone wherever possible

- stacked stone walls and PERMEABLE flagstone pathways are ideal (less runoff to storm-drains, water stays in the soil, where your plants can use it)
- pea gravel or decomposed granite pathways and stone (or faux stone) containers are a less expensive option

Incorporate Containers- terra cotta is ideal and inexpensive

- use large containers as a focal point
- cluster smaller containers together for more visual impact

Create focal points.

- Fountains, ponds, mosaics, small courtyards, pergolas, arbors
- Less expensive or appropriate for smaller gardens: tall urn, statuary, potted plant on pedestal, bench, eye-catching tree, small water feature, rock garden

Plant Selection

- any plants appropriate to your climate and soils will look Mediterranean style if you follow the above guidelines. See plant selection handout for many appropriate and beautiful choices!

Design Process

Site Analysis- Step One is OBSERVATION

- How many hours of sun does the garden receive? Is it morning sun, afternoon sun? Where would you like to create shade? Are there especially hot spots (in front of a South facing wall) or cold pockets (lower of shady areas) to be aware of
- What is the soil like? Dig a hole at least 1' deep and wide and fill with water. Does it take a few minutes to drain (very sandy soil) or more than a couple of hours (heavy, clay soil)
- What is the topography of the site like? How does water run (or puddle) on the landscape? How could we slow and sink the running water into the soil? How could you drain or spread standing water? Is there evidence of erosion (bare slopes, gulleys)
- Are there winds or views or noises that you would like to block or enhance?
- Are there any sensitive natural features that you want to preserve

Other Design considerations

- How much time or money do you want to devote to maintenance of your garden? (if very little, invest in automatic irrigation, choose tough plants)

- that can reach full size without needing to be pruned or hedged, and use weed cloth beneath mulch...all good ideas in any case!)
- What are the things that will most need your attention or that you will want to visit most often (things needing hand watering, kitchen herbs, fruits for grazing). Be sure to locate these in convenient areas that you walk by frequently.
 - Group plants together with similar water and soil requirements together (hydrozones). This will make irrigating more efficient and keep your plants healthier (Over and under-watering are the leading causes of plant mortality)
 - Think about seasonal change. Be sure to have some plants with interesting evergreen foliage to hold the garden together during periods of fewer blooms or summer dormancy

Step Two- Create a scale drawing of your garden and movable pictures or symbols for the different elements you want to include in your garden so you can play with different arrangements to find what is most aesthetically pleasing to you and also is in harmony with the ecological factors you observed on the site!

Installation

Fall (Sept/ Oct) is the best time to plant Mediterranean and California Native plants, while the soil is still warm. The winter rains will help the plants establish good root systems. Most visible growth will occur in the early spring. Although many native and Mediterranean plants are drought tolerant once established, they will require irrigation for the first 2 years.

Changes in topography—

- Terraces-- you may choose to terrace a slope to decrease soil erosion and runoff, improve the ease of accessing and maintaining your plants, or for aesthetic reasons. Gentle slopes with retaining walls of just a couple feet can be owner installed without the help of a contractor. Slope the stacked stones toward the soil behind them, and stagger where one rock meets the next from row to row, avoiding long vertical seams. It is advisable to have at least 4" of gravel behind your wall and drainage pipes coming through the bottom of your wall to allow water to drain through it.
- Swales—another method for slowing water running off a slope and allow it to percolate into and be stored in your soil, keeping your plants greener for longer periods of the year, is to build dig a swale... a shallow ditch ON CONTOUR with the slope (if it angles down the slope at all, it will become a fast moving stream during a storm event). Pile the soil from the ditch on the down-hill side of the swale to create a burm onto which you can plant your Mediterranean plants.

- Mounding- Because many Mediterranean and native plants require good drainage, if you are planting on a flat area with heavy soil, you may need to create a mound or berm of at least 12" to plant into.

Amending the Soil— Organic compost is incredible stuff because it improves the tilth of any soil. If a soil is heavy clay, it will improve the drainage. If soil is very sandy, it will act like a sponge and improve the capacity of the soil to hold water. In either case, it slowly releases nutrients to the soil at a rate that plants can take them up.

- It is always beneficial to have a soil test done on your soil, especially if there is any question of contamination and you will be growing food.
- Adding compost—new evidence is showing that it is best NOT to amend just the planting hole of a plant, especially in heavy clay soils. Plant roots will often not penetrate through the barrier between the amended soil and the surrounding clay and will, in effect, be confined to a clay pot. Either work 1-2" of compost into the top 4 inches of the entire planting area or layer compost on the top layer of the soil. This second method simulates the leaf litter of a natural forest or chapparal system, and is preferable for native plants.
- Mycorrhizae are symbiotic associations between plant roots and soil fungus. Mycorrhizal fungus can help with water and mineral absorption by plants, and greatly enhance plant growth and health. Mycorrhizal spores are sometimes included in a compost mixture or in certain organic fertilizers (EB Stone's *Sure Start*, for ex.), or can be purchased separately at garden centers (especially in the case of natives, which are better unfertilized) and added to the plant's hole at planting time or mixed with water and applied with a watering can.

Planting--

- Dig a hole at least 2-3 x the width of your plant's pot or root ball, and the same depth as your plant. Place your plant in the hole, being careful not to disturb the roots and only cutting any that are encircling the plant's root ball (root bound) or growing out the holes in the bottom of pot.
- Begin to back fill the hole, making sure to break up large clumps of soil so that there are no air pockets. When the hole is 1/2 filled, fill with water, allow to soak, and continue filling. Tapm the soil down with your heel, and then water in again. The plant should be planted about 1" above the soil level since some settling will occur.
- Create a shallow basin around the plant to catch and hold water, allowing it to sink to plants.

Mulching-- Aside from being attractive, mulch serves several functions including decreasing compaction of the soil from rainfall, moderating the temperature of

the soil and roots, and decreasing evaporation from the soil, greatly reducing the need to water frequently.

A number of materials may be used as a mulch including...

- Shredded bark or bark chips (redwood, cedar, Douglas fir)- a timber byproduct, long-lasting and attractive. Shredded bark is better at staying on a slope than bark chips. Good for trees and shrubs
- Wood chips- available for free from tree-service companies, good for trees and shrubs
- Stone and gravel- good choice for succulents, palms, and cacti
- Straw/ leaf mold- good for annuals, perennials, and vegetables. Inexpensive.

For maximum benefit, add 4" of mulch around the planting beds, keeping 4" from the stems and trunks of plants to prevent fungus and disease.

Weed Cloth-- Using a weed-cloth beneath the mulch is recommended to keep maintenance needs to a minimum. Recommend thick woven types rather than the thin plastic weed cloths (ineffective and degrade quickly). Moistened cardboard or newspaper are good options for re-use, although they would need to be re-applied every few years. They suppress weeds and keep moisture in the soil, gradually breaking down into the soil.

Irrigation-- A good drip irrigation system is highly recommended for saving water, decreasing weeds, maximizing the health of your plants, ease of installation, and adaptability to changing water needs.

- Delivers water directly to the plants, not the entire garden's soil.
- Delivers water at a slower rate that plants can absorb it, decreasing run-off and waste.
- Negligible amount of water lost to evaporation, compared to sprinklers
- Easy to install and adapt, since no trenches need to be dug and emitters can easily be added or removed by plugging with a "goof plug".
- Can customize the amount of water to different plants by using emitters of different rates (1/2 gph, 1gph, 2gph).
- As the plants grow, their water needs will change from more frequent, shallower waterings to less frequent, deeper waterings, to, in some cases, no additional water aside from rainfall.
- Best to run different hoses on different stations for trees & shrubs, perennials, or annuals and turf (if present)...over and under watering are the 2 leading causes of poor plant health or plant death

Plants for Mediterranean Gardens

Trees

Arbutus andrachne Grecian Strawberry tree
Arbutus Unedo Strawberry Tree
Chitalpa tashkentensis Chitalpa
Citrus limon Lemon
Cupressus sempervirens Italian Cypress
Eriobotrya Loquat
Ficus carica fig
Heteromeles arbutifolia Toyon
Jacaranda mimosifolia Jacaranda
Jubaea chilensis Chilean wine palm
Lauris nobilis Sweet bay/ Grecian laurel
Olea europea olive
Pittosporum
Prunus lusticanica Portugal laurel
Sambucus mexicana Mexican or Blue elderberry
Schinus molle California pepper tree
Washingtonia Fan palm
Yucca gloriosa Yucca

Shrubs

Arctostaphylos manzanita common manzanita
Artemisia (*A. powis castle*, *A. californica*)
Ceanothus Wild lilac
Cistus Rockrose
Cotinus Smoke tree
Echium candicans pride of Madeira
Feijoa sellowiana pineapple guava
Garrya Silktassel
Helianthemum nummularium Sunrose
Juniperus Juniper
Lantana Lantana
Lavendula Lavender ...many varieties appropriate
Leontis Leonaris Lion's tail

Mimulus aurantiacus Stickey monkeyflower
Myrtus communis Myrtle
Phlomis fruticosa Jerusalem sage

Punica ranata Pomegranate
Rhamnus californicus Coffeeberry
Rhamnus crocea Redberry
Rosa bankiosa Lady banks rose
Rosmarinus officinalis Rosemary
Salvia greggii Autumn sage
Salvia clevelandii Cleveland sage
Salvia officinalis Garden sage
Santolina chamaecyparissus santolina/lavender cotton
Teucrium fruticans Bush Germander
Westringia fruticosa Coast rosemary
Yucca

Perrenials

Achillea Yarrow
Aeonium
Agastache orange hummingbird mint
Agave
Aloe
Anigozanthos kangaroo paw
Baileya multiradiata desert marigold
Callirhoe involucrate poppy mallow
Coreopsis
Dudleya
Echeveria
Epilobium California fuchsia
Erigonium wild buckwheat
Euphorbia
Hesperaloe parviflora red yucca
Iris (*I. Douglasiana*, *I. Germanica*)
Lessingia California aster
Limonium perezii sea lavender/ statice
Lychnis coronaria rose campion
Malvastrum lateritium trailing mallow
Monardella coyote mint
Nepeta catmint
Origanum oregano, marjoram
Penstemon beard tongue
Perovskia atriplicifolia Russian sage
Phacelia
Phormium New Zealand flax
Rhodanthemum bosmeriense Moroccan daisy
Senecio cineraria dusty miller
Stachys byzantina lamb's ears
Tagetes limonii Mexican bush marigold

Thymus Thyme
Verbena verbena

Grasses

Festuca fescue
Helictotrichon oat grass
Melica melic
Muhlenbergia muhly
Nasella needlegrass
Sporobolus sacaton

Vines

Bougainvillea Bougainvillea
Parthenocissus Boston Ivy
Tecomaria capensis Cape Honeysuckle
Vitis wild grape
Wisteria Wisteria

RESOURCES

www.accessgreen.buiditgreen.org

This web site helps you locate green building materials

Bay Friendly & Stop Waste

www.BayFriendly.org

Working under the umbrella organization of Stop Waste, Bay Friendly Gardens promotes healthy gardening practices to protect local watershed and the Bay. Many workshops and garden tours are held throughout the year and at various sites in the bay area.

CLCA

www.clca.com

California Landscape Contractors Association. You can get answers to questions, find a landscape contractor or file a complaint here.

Lyngso Garden Supply

www.lyngsogarden.com

19 Seaport Blvd., Redwood City, CA 94063-2706, (650) 364-1730

Supplies rocks, tiles, soil, and other landscape materials

Soil & Plant Laboratory, Inc.

www.soilandplantlaboratory.com

352 Mathew Street, Santa Clara, CA 95050. Phone: 408.727.0330, Fax: 408.727.5125.

They have complete instructions as to how to take the soil sample and send it to Santa Clara for analysis. What you receive in return is a very complete report with specific remedies.

Flora Grubb Nursery

1634 Jerrold Ave., San Francisco, (415) 648-2670; www.florgrubb.com

Wonderful selection of succulents, tropical and hard to find drought tolerant plants.

Urban Farmer **www.urbanfarmerstore.com**

2833 Vicente Street, San Francisco, CA 94116 Phone: (415) 661-2204 Fax: (415) 661-7826

Sells irrigation and lighting supplies. Provides FREE classes on planning your own efficient irrigation system, including system automation with valves, timers, rain sensors and the new smart self-adjusting controllers. Their website is full of useful information and free downloads to help you with your irrigation system.

Books:

Plants and Landscapes for Summer-Dry Climates East Bay Municipal District

Sun Drenched Gardens the Mediterranean style Lucinda Lewis & Jan Smithen

Make Your Own Medeterranean Garden *Pattie Barron*

Plant-Driven Design *Scott Ogden & Lauren Springer Ogden*

Designing with Succulents *Debra Lee Baldwin*