



SUSTAINABLE LANDSCAPING

RESOURCE EFFICIENT LANDSCAPES FOR SANTA BARBARA COUNTY



SUSTAINABLE LANDSCAPING



- If many of the terms used here seem new to you, don't give up. A list of resources and references in the back of this brochure can help take the mystery out of creating your own sustainable landscape.

A WAY OF LOOKING AT YOUR YARD AS AN INTEGRAL PART OF THE LOCAL ENVIRONMENT.

Over time, our concept of landscaping has evolved. In the past, a lawn with a hedge and maybe a few flower beds were fine. Now we ask more of our landscapes. Around our house, we want landscaping that is attractive, has functional spaces such as an entertainment area, a children's play area or a vegetable garden, or provides erosion control or shade for the house. But at what cost?

SAVE MONEY AND TIME

Maintaining a typical landscape requires many kinds of input: time, money, labor, water, chemicals, and fertilizers. Most homeowners would be happy to reduce the amount of time, money, and labor that goes into their yards. The environment also benefits from decreased use of resources such as water, and potentially polluting elements such as chemicals and fertilizers.

REDUCE WASTE

Maintaining our landscaping also creates output – wastes such as plant trimmings and weeds, irrigation run-off polluted by the use of pesticides and fertilizers, and water lost by inefficient irrigation. The concept of sustainable landscaping asks us to examine the input and output of our landscaping and find ways to minimize both. Applying the principles in this brochure can save you time and money, and create a beautiful landscape that is environmentally responsible.



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LUSH... AND WATER-SAVING!

Many people envision that every water-saving landscape looks like a desert: cactus and rock without a lot of color. The landscape pictured here dispels that notion. The lush effect is created by the use of varied leaf color and texture, and the elimination of turf areas. A flagstone path invites you to explore the possibilities.



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- Many low water-using flowers - lavender, yarrow and penstemon - also make beautiful cut flowers.
- For efficient watering, design the shape of your lawn to fit the spray pattern of your pop-up sprinkler heads.



- Natural vegetation, like a venerable oak tree, can provide the focal point for the landscape design.
- Try experimenting with color schemes just as you would in an indoor room: silvery greens accented by bright yellow and gold blooms surround a small terrace. Water efficient and native plants are available in a wide variety of colors.
- Incorporating a small water feature adds a tranquil touch to a garden.



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FUNCTION & STYLE

Sustainable landscapes are also functional. They invite the viewer in with a variety of color and interesting lawn and patio areas. Careful planning can create outdoor “rooms” which can be used almost year-round in our mild climate. “Hardscape” areas, such as a brick patio or wooden deck, reduce water needs while providing areas for entertaining or relaxing in privacy. Hardscape areas designed to drain to planted beds conserve water and reduce polluted runoff.



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Look around in the community for ideas on creating your own appropriate landscape. Chances are that neighborhood landscapes you've admired in the past were actually created on sustainable principles.



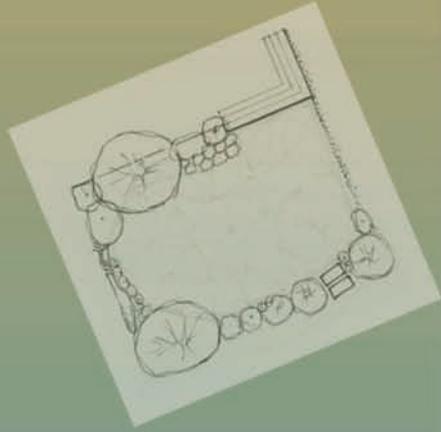
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SUSTAINABLE STYLE – HOME OR BUSINESS

More and more homeowners are installing sustainable landscaping suited to their family's needs, the style of their home, and the local environment. Spanish mansions, California bungalows, and 60s tract homes can all be enhanced by a well-planned, resource-efficient landscape. Businesses and municipalities also benefit from installing landscaping that requires less water and work. Sustainable landscaping principles are the same for commercial, municipal and residential plantings, and resource-saving landscaping in public places demonstrates concern for the local community.

PLANNING AND DESIGN

In order to have a sustainable landscape, you must plan it – it doesn't just happen. Planning is the starting point and possibly the most important phase!



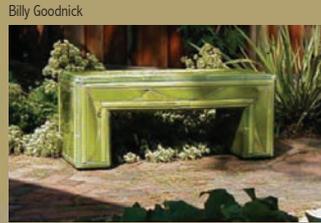
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STARTING OVER IS EASY

Many people have an existing garden when they begin to plan a more sustainable landscape. The task of converting a garden may seem overwhelming, but becomes manageable when done over time. Once you've planned the surroundings you'd like to achieve, implement your plan in phases, over a number of years.

DESIGN WITH THESE STEPS IN MIND.....

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- Begin by reducing lawn areas, adding soil amendments, and installing an efficient irrigation system.

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- Next add water-efficient plantings and trees, patios and walkways, or other special features.

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- Fine tune your landscape by adding annuals or wildflowers, and adjusting the irrigation system for maximum efficiency.

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FIRST, ANALYZE YOUR SITE



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- Consider your local climate and try to orient patios for the benefits of sun or shade.
- Trees or vines near the house can block the summer sun and lower temperatures.



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Take into consideration your outdoor activities, existing qualities of your yard such as interesting rocks or large trees, and special needs such as space for a vegetable garden and compost pile. Make note of the unique traits of the location, such as conditions of sun and shade, ground slope, available moisture, soil type, and air movement. (See “Soils”, following.) By considering these factors and planning with them in mind, the resulting landscape will be easier to maintain.

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CONSIDER SOLUTIONS TO SITE PROBLEMS

The planning phase is also a time to propose solutions to problems, such as hard clay soil or poor drainage. For example, a shady area with poor soil could provide space for a small patio, the sound of water from a fountain could mask street noise, or you could incorporate a swale or dry creek bed to provide drainage and retain water onsite. Laying out the design on paper and on the ground will help you identify problems and solutions.

- Make a list of possible materials needed to create your landscape. Include recycled materials if they're available locally. For example, railroad ties and broken concrete can be incorporated into retaining walls or patios.



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NEXT CONSIDER HOW YOU WANT TO USE YOUR LANDSCAPING

There are many functions for a garden: to provide beauty, a place for children to play, space for growing food, erosion control, wildlife habitat, and climate control. You should also design your area so that rainwater and runoff from irrigation are retained on site. This helps conserve water, and also prevents polluted runoff from reaching our creeks and ocean.

SOILS

Healthy soil is an important foundation for every landscape. Dealing with problem soils can take up much of the time spent in maintaining a yard. Aspects of soil composition, slope, and need for amendments must all be considered. Characteristics of the soil can help determine the best choice of plants and irrigation systems for your landscape.

DIFFERENT SOILS HAVE VARYING WATER NEEDS

Clay soils absorb water slowly and cause surface runoff if watered too quickly. Sandy soils dry quickly because of fast downward percolation. It is important to know your soil type. Your local water purveyor or landscape professional can help you determine what type of soil you have.

IMPROVING YOUR SOIL

Soil amendments, such as redwood bark or compost, will improve your soil. Composting your garden waste serves an important dual purpose: it decreases the amount of materials taken to the landfill (up to 50% of the waste stream is yard debris) and provides a valuable, organic amendment for your soil. Many good books are available on the subject of composting.

Mulching can help your landscape no matter what the soil conditions. Mulch covers and cools the soil, minimizes evaporation, eliminates weed growth and slows erosion. As mulch decomposes, nutrients are added to the soil. Mulching your garden 2-3" deep will allow you to irrigate less often.



Soil type and moisture can be assessed with a soil probe.

Goleta Water District Demonstration Garden



- Soil testing can help you determine the characteristics of your soil, so that you can plan accordingly. Check under “laboratories” in the yellow pages to find a lab that can analyze your soil.
- Bark chips and wood shavings make attractive organic mulches. Some local tree services will deliver wood chips free of charge. Mulch is also available for free pick-up or low cost delivery from the County. For more information visit www.countyofsb.org/pwd/



St. Catherine's Lace (*Eriogonum giganteum*)



California Lilac (*Ceanothus sp.*)



Yarrow (*Achillea sp.*)



Flowering Oregano (*Oreganum sp.*)

Penstemon (*Penstemon sp.*)



PLANT SELECTION

Choosing plants for your yard is an important step in making the landscape sustainable. Besides the usual consideration of how the plant looks, there are other important factors to keep in mind.

RIGHT PLANT, RIGHT PLACE

Choose plants that will grow to an appropriate size for the area you're planting. If a plant that grows into a tree is selected for a hedge, the result is endless pruning: more work for you and more material for the landfill. Many reference books will include the mature size of plants. Before you select a plant, find out if it has pest problems locally. Some plants are more susceptible to disease and insects, requiring more effort and pesticides or herbicides to keep them alive.

New Zealand Flax (*Phormium tenax*)





Tea Tree (*Leptospermum sp.*)



Germander (*Teucrium chamaedrys*)

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Day Lily (*Hemerocallis fulva*)

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Matilija Poppy (*Romneya coulteri*)



Max E. Badgley



CONSIDER WATER NEEDS

In our semi-arid climate, the water requirements of a plant are an important consideration. Many beautiful, water-wise plants are available locally. To avoid maintenance conflicts, group plants with similar water, sun, shade and soil requirements. This divides the landscape into “hydrozones” which also makes programming an irrigation controller much more efficient.

LAWNS

Lawns can be an attractive and useful part of a landscape, but can require large inputs of water, labor and often chemicals to keep them healthy.

Many people find that even while reducing the lawn area, they can still meet the need for children’s or a pet’s play area. A smaller lawn requires less fertilizer and mowing, and creates less waste (lawn clippings) to haul away.

- Consider planting a meadow instead of a lawn; seed mixes are available that usually include wildflowers, clovers, and herbs. These meadows require no mowing, and less water and fertilizer.
- When mowing the lawn, increase the mowing height and leave clippings on the surface as mulch. Although there are no truly “drought tolerant” turf grasses, some varieties do use less water.
- If plants develop disease, look for biological controls (insects) or non-chemical means of easing the problem.



IRRIGATION & WATER EFFICIENCY

In Southern California's semi-arid climate, water is the most limited resource that goes into the landscape. The choice of irrigation systems, techniques, and irrigation scheduling has great impact on the efficiency of water use. Benefits of efficient water use, besides a lower water bill, include a healthier garden and less work.



IRRIGATION SYSTEM DESIGN

- Group plants according to their water needs creating hydrozones, and use separate irrigation valves for each hydrozone so individual scheduling is possible.
- Make sure you have pressure regulators for each valve and that the pressure is set to manufacturer recommended pounds per square inch (psi) for your sprinkler type.
- Find ways to capture natural rainfall, such as cisterns or percolation basins. Hard surfaces, such as patios, should drain into planted areas. Consider the use of porous paving surfaces, such as bricks laid on sand. Keeping rain and irrigation water on your landscape reduces irrigation needs and prevents polluted runoff.
- Consider using graywater on your landscaping. Check with your local water purveyor to obtain graywater system requirements and permit information.

■ THE THREE STEPS TO EFFICIENT IRRIGATION:

STEP 1: CREATE A SEASONAL IRRIGATION SCHEDULE

To be most efficient, watering decisions should be made by observing the condition of plants, soil and weather — not by a pre-set schedule. Easy tools that will assist you in creating a seasonal irrigation schedule for each area of your landscape include a soil probe, catch can test for the lawn areas, and a landscape water calculator (see www.sbwater.org). You will need to do a little homework to develop your seasonal irrigation schedule. An important first step is to know your soil type. Your local water purveyor will assist you in collecting the information and developing a seasonal irrigation schedule.

STEP 2: TROUBLESHOOTING

At least once per month, turn your irrigation system on manually and check for leaks, broken sprinklers or drip emitters, and overspray. Make corrections as needed.

STEP 3: ADJUST YOUR IRRIGATION CONTROLLER

Avoid over-watering, the most common cause of lawn and plant disease. Adjust the irrigation schedule as the weather changes. Use the seasonal irrigation schedule you created in Step 1 to adjust your irrigation controller. Most of our soils cannot absorb water as fast as sprinklers apply it. The best technique is to water in short on/off cycles early in the morning. Most irrigation controllers have a multiple start time function, so you can break up watering time.

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- Check out www.sbwater.org for resources and contact information.
- For a simple approach to check if you need to water, use a soil probe. (See “Soils” section of this booklet.) If the soil is moist around plants’ roots, then there’s no need to water.



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- Consider the use of time-release fertilizers. These fertilizers, which look like charcoal briquets, get buried around the drip-line of the plant. This reduces the possibility of fertilizer-laden runoff.
- For more sustainable garden care instructions, use the “Working with your Gardener for a Healthy Garden” brochure, available by calling 568-3440.

MAINTENANCE

Thoughtful planning and design, attention to soil characteristics, careful plant selection and irrigation design should all contribute to a landscape that requires less maintenance. A sustainable landscape reduces maintenance cost and effort because it requires less water, fertilizers, chemicals, pruning and mowing.

PRUNING

All landscapes, however, require some maintenance. Prune plants carefully, keeping in mind that excessive pruning will promote growth, increasing the water required and waste produced. Most plants look best if allowed to maintain their natural growth habit.

LAWN CARE

Mow lawns with the mower at the highest setting to keep the roots and soil cool, and reduce the amount of clippings. Compost trimmings from your lawn and plants to produce a rich soil amendment which also reduces fertilizer requirements.

WEEDING

Keep weeds pulled; they compete with your landscaping for water.



GREEN GARDENER PROGRAM

The Green Gardener Program for Santa Barbara County educates local gardeners in resource efficient and pollution prevention landscape maintenance practices. The Green Gardener Program is a regional program designed to offer education, training, and promotion of participating gardeners and landscape maintenance contractors.

Classes are offered in both English and Spanish. For More information go to www.greengardener.org.



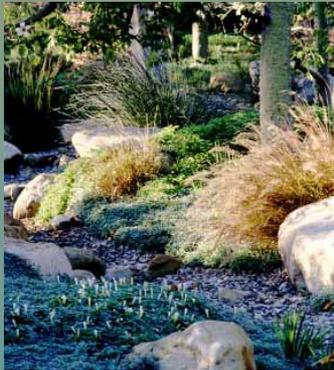
The person who hires a Green Gardener will have a professional with the knowledge and resources needed to make environmentally responsible, economically sound landscaping decisions.

If you currently employ a gardener, urge him or her to attend a Green Gardener class. For more information about the program, a class schedule, or the current list of Green Gardeners, visit www.greengardener.org, or call 564-5460.



Alice Keck Park Memorial Garden

Corner of Micheltorena and Santa Barbara
Streets, Santa Barbara



NEED MORE INFORMATION?

PLANT LISTS

Local nurseries have a wide variety of water-wise plants. You can obtain plant lists from your local water purveyor. Be sure to seek as many information sources as possible for the widest variety of plants in your garden. Bougainvillea and iceplant need not be your water-saving mainstays! Check out www.sbwater.org for an interactive water-wise plant database.

DEMONSTRATION GARDENS

Many local water purveyors have demonstration gardens, or can direct you to one in your community. Some are simply a collection of water-wise plants, while other address issues such as design, irrigation, erosion control, and fire-resistant landscape design. Visit www.sbwater.org for more information on demonstration gardens.



Goleta Water District Demonstration Garden
4699 Hollister Avenue, Santa Barbara



Santa Maria Valley Sustainable Garden
624 West Foster Road, Santa Maria

PROFESSIONAL ASSISTANCE

You may wish to call in a professional during the planning, installation, or maintenance phases of creating your sustainable landscape. Titles can be confusing; the following will give you an idea of which professional you may want to consult.

Landscape Architect: A landscape architect can design the entire landscape, including hardscape features (patios, decks, etc.) and the irrigation system. However, a landscape architect does not perform the actual installation of the landscaping.

NOTE: *A landscape architect or contractor must be tested and licensed by the state.*

Landscape Contractor: A landscape contractor can coordinate all phases of your project – design, installation of the irrigation system, construction of hardscape features, and planting. The design may be done by the contractor or by a landscape architect.

Gardener: A gardener can maintain your garden and irrigation system once it is completed. Generally, this person is not licensed to provide any design or installation services.



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REFERENCES

Water purveyors often have a variety of brochures on sustainable landscaping principles. Call your local purveyor for free publications on topics ranging from efficient irrigation to tree maintenance and water-wise plants (see the list of Water Purveyors, following) or go to www.sbwater.org.

Check your local library or bookstore for publications on sustainable landscape topics. Below is a list of some books you may find useful.

California Native Plants for the Garden, Carol Bornstein, David Fross and Bart O'Brien, Cachuma Press, 2006.

Common Sense Pest Control, Darr Olkowski; The Taunton Press, 1991.

Create An Oasis With Graywater, Art Ludwig, Oasis Biocompatible Products, 1994.

Drip Irrigation for Every Landscape and All Climates, Robert Kourik, Metamorphic Press, 1992.

Sunset Western Garden Book, Lane Publishing Company, (latest edition).

The Rodale Book of Composting, Deborah L. Martin & Grace Gershuny, Rodale Press, 1992.

Trees of Santa Barbara, Robert Muller and J. Robert Haller, Santa Barbara Botanic Garden, 2005.

RESOURCES

Sbwater.org – water conservation is a click away.

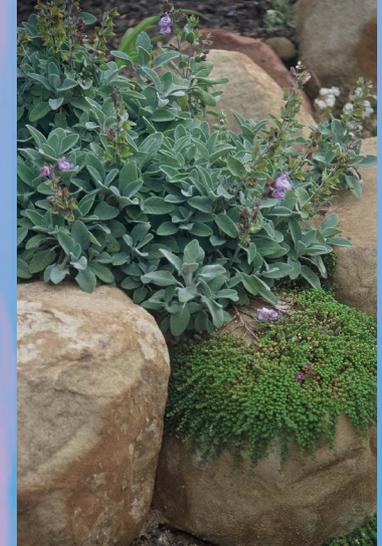
Go online now to discover how to:

- Purchase water efficient appliances
- Use the Landscape Watering Calculator
- Search the Water Wise Plant Database
- Use smart irrigation controllers
- Be water wise in your garden
- Read you water meter
- Fix leaks & maintain appliances

Santa Barbara Botanic Garden, 1212 Mission Canyon Road, Santa Barbara, CA 93105, (805) 683-4726: www.sbbg.org. Displays of native California plants; Home Demonstration Garden of water conserving native plants; books and garden publications; classes & tours.

Green Gardener Program, c/o City of Santa Barbara, P.O. Box 1990, Santa Barbara, CA 93102, (805) 564-5460; www.greengardener.org. Trains gardeners in resource efficient and pollution prevention landscape maintenance practices. Provides a list of trained green gardeners.

University of California Cooperative Extension, Santa Barbara County Office: 624 West Foster, Santa Maria, CA 93455. Free and priced information on horticulture, erosion control, pests & diseases, soils, irrigation. (<http://cesantabarbara.ucdavis.edu>)



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WATER PURVEYORS

For water conservation programs in your community, call your local water purveyor. You can also check online at www.sbwater.org/purveyors.htm.

All numbers are in the 805 area, unless otherwise noted.

City of Buellton	688-5177
City of Guadalupe	343-1340
City of Lompoc	875-8298
City of Santa Barbara	564-5460
City of Santa Maria	925-0951
City of Solvang	688-5575
Carpinteria Valley Water District	684-2816
Cuyama Community Services District	(661) 766-2780
Golden State Water Company (Orcutt)	349-7407
Goleta Water District	964-6761
Los Alamos Community Services District	344-4195
La Cumbre Mutual Water Company	967-2376
Mission Hills Community Services District	733-4366
Montecito Water District	969-2271
Santa Barbara County Water Agency	568-3440
Santa Ynez River Water Conservation District ID#1	688-6015
Vandenberg Village Community Services District	733-2475

Goleta Water District Demonstration Garden



INTERNET RESOURCES BY SUBJECT

GENERAL

Backyard Wildlife Habitat www.nwf.org/backyardwildlifehabitat

California Landscape Contractors Association (CLCA) www.clca.org

US EPA's WaterSense Program www.epa.gov/watersense

COMPOSTING

Composting Council www.compostingcouncil.org

Cornell Composting Site www.cfe.cornell.edu/wmi/composting.html

WATER HARVESTING/GRAYWATER

Greenbuilder.com www.greenbuilder.com/sourcebook/rainwater.html

Oasis Designs www.oasisdesign.net

Rain Gardens clean-water.uwex.edu/pubs/raingarden/gardens.pdf

IRRIGATION

Water Conservation Website of Santa Barbara County www.sbwater.org

Irrigation Association www.irrigation.org

TURF & LAWN CARE

Ecological Lawn care www.life.ca/nl/43/lawn.html

PLANTS

Interactive Water-Wise Plant Database www.sbwater.org

INTEGRATED PEST MANAGEMENT

Integrated Pest Management Information Service www.efn.org/~ipmpa

UC Davis IPM Online xipm.ucdavis.edu



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