

Water Wise Landscaping for the Goleta Valley



For more information and online resources visit www.GoletaWater.com/waterwiselandscaping

A Guide to the Water Wise Landscaping

Water wise landscaping offers many benefits, including saving water, money, and reducing the time required to maintain your yard. A variety of plantings can be used to fit any design aesthetic without sacrificing a beautiful landscape.

This brochure provides information on water use, irrigation systems, plant types, and basic landscaping. Whether you are refreshing landscaping after the drought, or designing new landscaping for your home, water wise design principles can help you achieve a beautiful and sustainable result. There are seven basic garden styles: Traditional, California Native, Mediterranean, Exotic, Perennial Border, Desert, and Edible. These gardens are arranged and landscaped in a manner similar to what would be done at a typical residence, with a variety of plant groupings, pathways and garden features. Examples of these gardens are also available for viewing at the Goleta Water District offices located at 4699 Hollister Avenue.

What to Look For

There are three types of water wise plants featured in the gardens included here: 1) California natives; 2) plants from other arid areas of the world; and 3) plants from more water-rich regions, which can easily adapt to our Southern California climate. All of these plants can either be found at or ordered through local nurseries.

The key to having a beautiful yet water wise garden is choosing the right plants for your yard and grouping them appropriately. Different types of irrigation that can be used depending on your needs. Drip irrigation systems put water at the plant's root system and reduce water loss to evaporation or runoff. However, spray systems can also be effective irrigation tools depending on your garden and how you manage the system.

Why Choose a Water Wise Garden?

The Goleta Valley has a semi-arid climate marked by periods of drought. This places stress on both landscaping and the District's water supply—which includes Lake Cachuma, the Goleta Groundwater Basin, recycled water, and imported water from the State Water Project. Access to these diverse water supplies and the community's commitment to conservation help meet the water needs of the 87,000 residential, commercial, and agricultural customers in the Goleta Valley, especially since during periods of drought some or all of these sources can be under stress. Water wise landscaping ensures that even during periods of low rainfall your garden will look its best. Water wise gardens also tend to require less effort to maintain, with many needing no additional fertilizer, reduced chemical use and runoff and making them more sustainable.



A beautiful water wise garden saves water and money!

The District Demonstration Gardens



Traditional Garden



Mediterranean Garden



Native Garden



Perennial Border



Desert Garden



Exotic Garden



Edible Garden



Mediterranean Garden

Often, this type of garden is chosen because it fits the architectural design of the home. However, it can also be used with homes of relatively neutral design, such as ranch style homes. It is important to design the garden based on the uses planned for that space. The Mediterranean Garden area contains many different elements: palm trees, ground cover, and a water element. In addition, plants with silver and gray foliage compliment the cool color scheme. These plants are a mix of long-living evergreen shrubs and less permanent perennials and ground covers. The Mediterranean garden requires about the same maintenance time as a large lawn, but requires less in terms of materials and water. This Mediterranean Garden area represents an average low water-using area.



Perennial Border

A perennial border is generally located close to the home or in an area that will be seen frequently. This garden is designed for strolling. Perennial borders usually look best in front of a solid backdrop of vegetation, a vine-covered fence, or a wall. They are often the focal point of a larger bed or placed along frequently traveled walkways. The plants in this Perennial Border area thrive in full sun with minimal irrigation. They were selected as much for foliage contrast and form as for flower color. The foliage contrast will make the garden interesting even when it is not flowering. The dominant color scheme of the flowers is pastel although some white has been used to amplify the other colors. You can also use complementary colors to create a highpoint. Another important factor is choosing the right plants for the right space. To keep plants looking their best and to promote new growth, blooms should be removed regularly. This Perennial Border area falls into the average low water-using category of the garden.



Exotic Garden

This garden introduces you to unusual plants that are less commonly seen in this area, but still were suited to the local climate. The plants typically have bright, bold colors - orange, red, and yellow flowers and matching foliage. These plants may be found at professional, full-service nurseries, or, if they are not in stock, can be specially ordered. Because this garden lies on the intersection of a busy street, the design considered the fact that it would often be viewed from an automobile window. When designing for "curb appeal" use simple, broad themes and bright colors that can be easily seen from a distance. The Exotic Garden area is extremely low maintenance. Cutting the plants back once a year is the only regular upkeep needed. It has also been designed to have year-round interest.



Traditional Garden

This garden is styled toward use around older homes where the existing design theme does not need to be updated. The plants selected for the Traditional Garden area are similar to plants that have been used in gardens for the last fifty years. These plants are water thrifty and blend well with established gardens. By using examples from this garden, you will be able to replace high water-using plants with low water-using plants. But be sure to keep plants with similar water needs together, so as not to over-water the new planting. Many customers have mulched over or removed lawns in recent years, but if you are interested in keeping a lawn there are also several types of lower water use turf available.



Southern California Native Garden

This garden demonstrates plants that are native to the Southern California region. Many gardeners prefer to use native plants because they blend well with the natural landscape, and their water needs are compatible with the climate. Using these plants works well for those who live in areas with existing native vegetation. Native plants provide habitat for local and migratory birds and act as hosts for beneficial insects that can reduce your dependence on chemical pest controls. Although many people prefer an all-native plant garden, many of these plants can be used with any style of landscape. They are also the best-adapted plants for our local soils, and often need little or no fertilizer and water to look their best.



Desert Garden

Cactus and succulents predominate in this Desert Garden area, and are most commonly used in arid or southwestern-style gardens. Planting succulents can cut water use by as much as 80%. Succulents are highly efficient water users and have developed a number of specialized water saving adaptations, including extensive root systems to collect the water that they store in their leaves and stems. Consider using succulents in larger groupings of one variety for their strong sculptural forms and unusual textures. They should require no supplemental irrigation within two to three years of planting.



Edible Garden

Edible Gardens are increasingly popular as a source of supplemental produce and a fun project for beginning gardeners and kids. These gardens provide the added benefit of providing a variety of edible fruits and vegetables. While typically more water intensive than the lowest water need gardens, they still use substantially less water than a typical lawn. By potentially reducing trips to the store and the need to ship produce, they also provide an additional sustainability benefit.



Water Wise Landscaping Resources

Planning Your Garden

The following steps will help you to plan and design your garden. Although many people prefer to buy the plants they like and find room in the garden for them, this approach can lead to maintenance problems later. These steps can guide you in designing a beautiful, resource-efficient, functional outdoor extension of your home.

First decide how you want to use the garden, what types of plants are desired, and how to irrigate them efficiently.

1. How do you want to use your garden?

Think of your garden as an extension of your house, with rooms containing floors, walls, windows, doors, and, perhaps, a ceiling. Design this room as you would any room by deciding how you will use it. Do you need shade or privacy from the neighbors, an entertainment area in the back yard, a vegetable garden, or an orchard? This list of needs will help in planning your garden.

2. Analyze your site.

Draw a scale plot plan of your site with the following features:

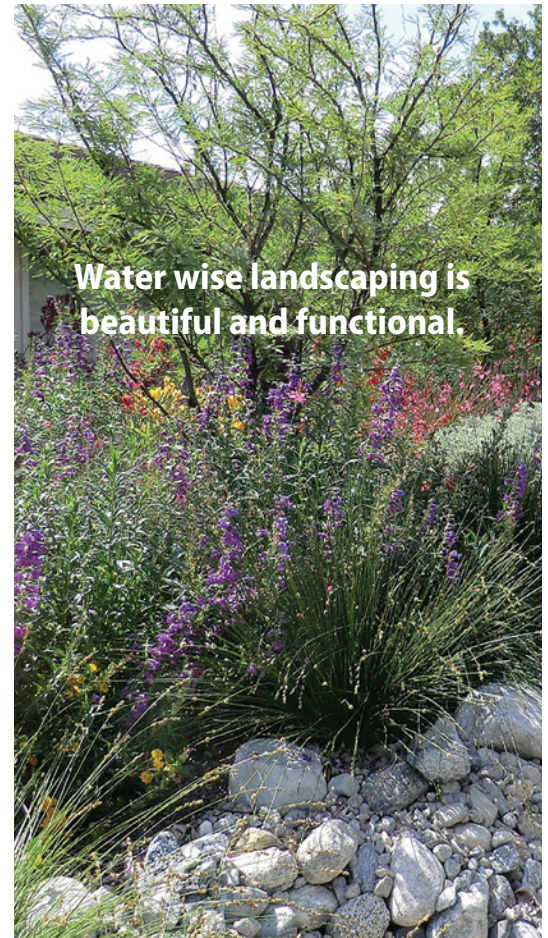
- House
- Existing patios and sidewalks
- Existing trees and shrubs
- Existing irrigation system
- Sun direction
- Slopes

3. Plan your hardscapes.

You have now thought of how to use your garden and have a detailed drawing of the area. Consider what needs to be added or removed to allow your new ideas to take shape. Think about new structures first, such as decks or covered patios. Is a new walkway needed or new fence to screen views? Think about whether an activity would be best located in sunny or shady areas. Do a few quick variations and choose the one that meets your needs. Once you have decided, draw your hardscape features onto the scale plan.

4. Be aware of micro-climates.

All gardens are full of variation. Your garden may contain hot, sunny areas or cool, shady areas. A plant that looks good planted in full shade in your neighbor's yard probably will not do well in your yard if planted in full sun. These areas will require different plant choices and watering needs. Professional landscapers call these areas micro-climates. Mark them on your plan.



5. Choose appropriate plants.

Building a beautiful, low-maintenance, water wise garden depends on choosing the right plants. The plants in the District Demonstration Gardens are suited to the local environment and will thrive in a Goleta Valley garden. These trees and shrubs are durable, well adapted and beautiful. Lawns provide areas for recreation, children, and pets but require more water, maintenance time, and natural resources than other forms of landscaping. For this reason experts recommend prioritizing lawns in areas where they will be used, and reducing or replacing unused portions.

Note the different textures of the various turf varieties. Recognize the needs of your garden in choosing plants. Do you need shade around the house or to cool a hot room? It is critical to choose plants that will not overgrow their planting sites, so look up information about the plants you are considering. If you cannot find the plants you selected, your nursery should be able to order them.

6. Place plants in hydrozones.

As in the District Demonstration Gardens, you should place your plants in zones according to their water needs. If you group plants with similar water needs together, it is much easier to ensure that each plant receives the appropriate amount of water. Planting in hydrozones allows you to lower your garden's water use.

7. Plan your irrigation system.

An ideal irrigation system gets the right amount of water to the right place at the right time.

All plants need some water, but not all plants need the same amount of water. That's why it is important to group together plants with similar water needs, and to choose an irrigation system, or combination of systems that best meet those needs. Within our gardens you can see a variety of irrigation systems selected for their suitability in meeting the watering needs of particular groups of plants.

There are two basic types of irrigation systems for use in your garden: micro irrigation and sprinkler irrigation. A micro irrigation system brings water to the root zone of the plant. Micro irrigation consists of two types, mini sprinklers and drip irrigation. Trees and shrubs should be watered with micro systems whenever possible. Drip irrigation when properly designed affords the greatest water savings potential, but if improperly designed can result in a poor performing landscape.

A sprinkler system is the traditional style of irrigation. It is best suited for lawns or ground cover, but can have high evaporation losses if improperly designed and managed. Micro irrigation systems can have high evaporation losses as well and should only be used as site conditions allow.

An automatic controller can make watering easy and efficient. Automatic controllers can also be linked to moisture sensors and rain gauges. Controllers should be adjusted monthly to correspond to climatic conditions. In addition, weather-based irrigation technology is available that uses real-time weather data to calculate and use only the amount of water needed.



Installing Your Garden

Now that you know what you want your new garden to look like and how it will be arranged, it is time to make your plans a reality.

1. Build your hardscapes.

Build any new structures first. Drainage systems, new walkways, decks, patios, fences, or walls should be built before planting begins to avoid damaging both the irrigation system and the plants. Also consider the need for new utilities that must be placed underground.

2. Improve your soil.

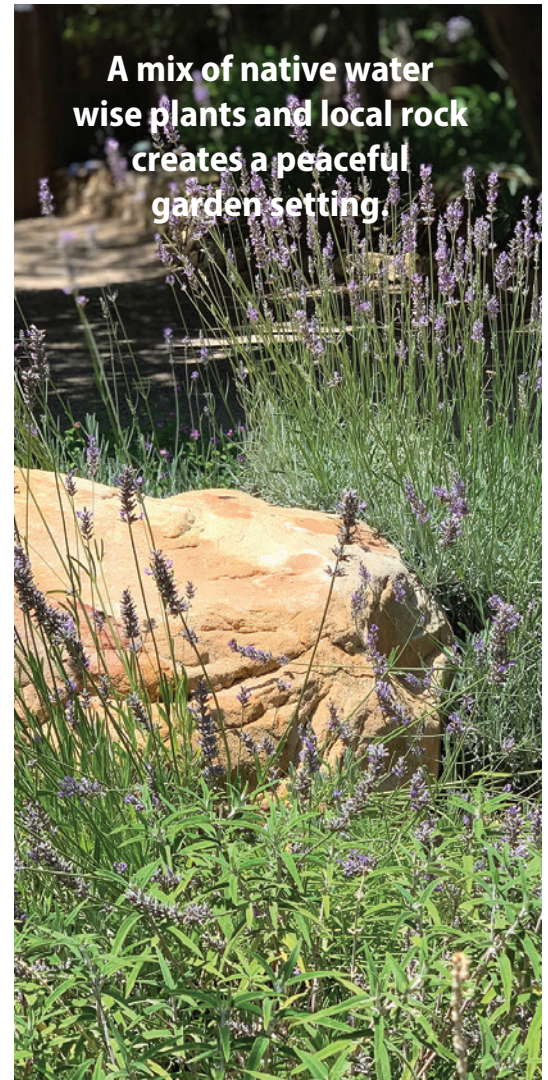
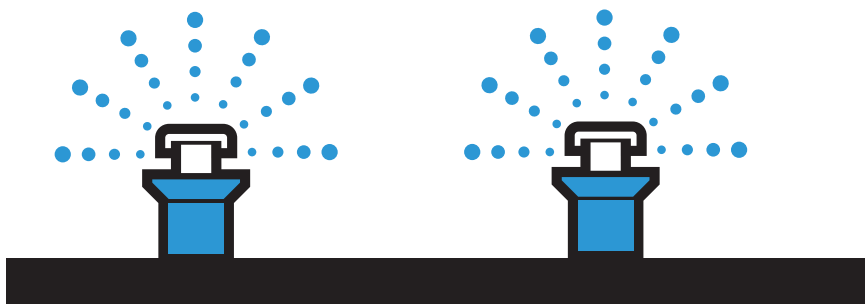
Healthy soil is essential to a healthy garden. If your soil drains too fast (too much sand), too slowly (too much clay), or lacks nutrients, you can improve it with soil amendments. Amendments should be blended with the soil to the root depth of your plants. There are two types of soil amendments: non-chemical and chemical. Non-chemical amendments are mixed with soil in order to increase water holding capacity and improve soil structure. Examples of non-chemical amendments are compost, aged manure, and nursery mixes. Chemical amendments add nutrients to the soil or change the soil chemistry so that plants will be healthier. Soils are usually common over a large geographic area, so your local nursery may be able to tell you about the soil in your area. Also, many native and Mediterranean plants do not need to have extra nutrients added to the soil.

3. Install your irrigation.

There are many publications that give step-by-step instructions for assembling and installing your irrigation system. A good installation contributes to irrigation efficiency.

If possible, have your system professionally designed. Much of the water wasted in gardens is the result of poor design. Some criteria for a good design are:

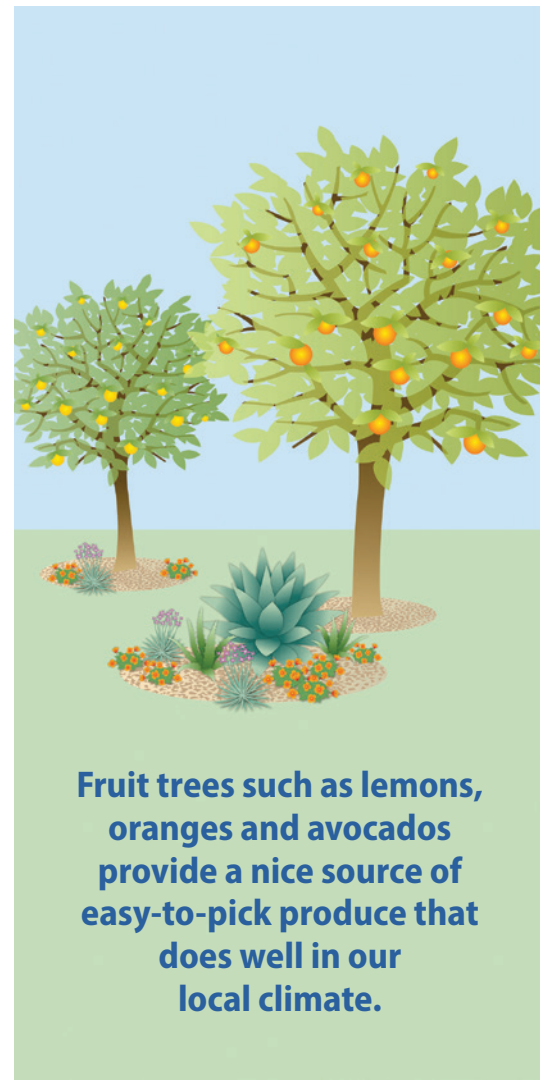
- Matched precipitation
- Distribution uniformity
- System operating pressure at correct range
- Edge control for overspray
- Heads chosen to match mature plant



4. Plant your plants.

Plants and shrubs come in all different shapes and sizes. There are several basic tips for planting no matter what type of plant you have.

- The hole for the plant should be no deeper than the plant's root ball and twice as wide as the root ball. A deeper hole often results in plants settling too far below the existing soil after watering. This leads to many problems.
- Make sure the soil in the hole is moist, but not soggy, and the edges of the hole are broken enough to permit the roots to penetrate. Add some loose backfill soil (mixing 3 parts site soil with 1 part organic planting mix) to the bottom of the hole. Some people also add a sprinkle of bone meal to this mix to get the roots started.
- When plants are root-bound in the containers they come in, gently loosen roots at the bottom and sides before planting.
- Plant the plant so the top of the root ball will be about 2 to 4 inches higher than the surrounding soil.
- Fill the hole halfway with soil and water enough to settle the soil. Wait for the water to disappear before filling the plant pit.
- Form a watering basin by building a soil ridge around the planting hole. Watering basins make sure the water you apply soaks down around the plant's roots instead of running off. Be sure to remove the basin after the plant's second watering.



5. Mulching to improve the soil.

Mulch is a layer of material you place around shrubs and trees to help keep soil from drying out too quickly, to keep soil temperatures lower, and to keep weeds down. Typical mulches include material such as shredded bark or compost. Mulch should be placed several inches away from tree trunks and should extend several feet outward. For shrubs and flower beds, cover the soil surrounding the plant but avoid touching the bark of the plant. Mulch also encourages soil microbes, which assist plants in water and nutrient uptake. Reapply as needed each spring. Mulching is the best investment you can make for the long-term benefit of your garden.

5. Keep a record.

Draw your garden as you installed it on your plan. It is especially important to know where all your irrigation lines are in case of a leak or a break in the line. Having these drawings is also very helpful when planning new projects in your yard.



Maintaining Your Garden

The key to a beautiful garden and wise water use is more than just choosing the appropriate plants for our environment. On-going maintenance is very important to the health of your garden, as well as keeping your water use low.

Improperly installed and poorly functioning irrigation is a major source of water waste in landscaping. There are several ways that you can avoid wasting water:

- Check for and fix leaks.
- Raise sunken sprinkler heads and make sure they are vertical.
- Make sure sprinkler heads are properly matched and that they cover properly (spread the water evenly), otherwise you will water enough for any dry spots and over-water everything else.
- Replace broken sprinkler heads, microsprinklers, or drip emitters with the identical make and model to maintain the original design pattern.

It is also important to create and maintain a regular watering schedule that gives the plants what they need when they need it. Watering your garden properly is the most important thing you can do to save water.



Water wise gardens are attractive and productive!

1. Develop an efficient watering schedule.

Your goal should be to water plants deeply but infrequently to encourage deep root growth. During each watering allow water to soak down almost to the bottom of the root zone:

- Cool season turf 6"
- Warm season turf 8"
- Low shrubs 12"
- Large shrubs 18"
- Trees 24"



Adjust timer settings

To know how deep your irrigation reaches you should probe the soil about 8 hours after irrigation. Sometimes water runs off before it soaks in deep enough. If this happens, try watering for briefer periods in shorter intervals, e.g., 15 minutes each hour for 3 hours instead of 45 minutes in one hour. Water your lawn only when you need to. Try this test: step on an area of grass. If it springs back, it probably doesn't need water.

2. Fertilize when necessary.

Fertilize only those plants that require nutrients not already available in your soil. The appearance of the plant is your first guide. If fertilizer is needed, apply once a year just before the growing season. If you have a drip system, you will have to water the fertilizer in with an overhead system to the depth of the root zone. Use organic based fertilizers when possible. Frequent fertilization can lead to excessive growth, which means extra water use and maintenance, and chemical runoff into our streams, ocean, and water table.

3. Weed out competitors.

Weeds compete with trees, shrubs, and plants for water. Using drip irrigation greatly reduces weeds by supplying water only to the areas right around a plant's root zone. In addition, mulch can help to eliminate weeds between plants and preserve moisture in the soil. Keep lawn and groundcovers away from the bases of trees, as they will grow faster when they do not have to compete for water. This will also reduce mechanical damage to the tree from mowers and edgers.

4. Prune when necessary.

Aside from occasional weeding, your new garden will only require turf maintenance and occasional pruning of trees and shrubs. Remove dead, diseased wood, crossed limbs, suckers, and weak vertical growth.



Occasional pruning keeps trees healthy and productive.

Principles of Sustainable Landscape

In planning a new garden for your home there are several items that you should consider:

1. Careful planning and design.

A sustainable garden is designed to be both attractive and in balance with the local climate and environment and it should require minimal resource inputs. Thus, the design must be “functional, cost-efficient, visually pleasing, environmentally friendly and maintainable”.

2. Use of low water-using and native plants.

Plants that are native to the local climate save water and look beautiful. Selecting plants that are disease-resistant reduces the need for chemicals.

3. Use of efficient irrigation.

Drip irrigation and micro-sprayers save water and reduce maintenance. Irrigation management and maintenance are just as important as the original equipment you install. Know the water needs of each plant, your soil type, and observe how the garden is adapting to the irrigation method.

4. Use of hardscape areas.

Paths and patios create outdoor ‘rooms’, require little maintenance, and consume few resources.

5. Use of lawn alternatives.

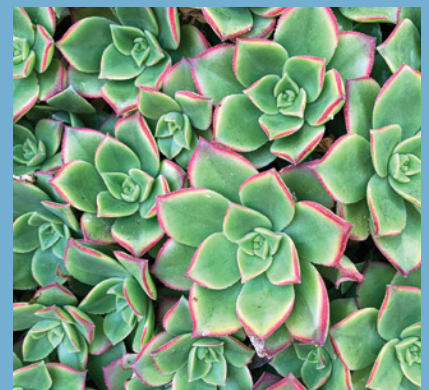
Lawns tend to be among the largest source of residential water use. For that reason, many customers chose to reduce lawn area to those spaces used most typically for entertaining, children and pets. Reduced lawn area and use of alternative lawn species can reduce water use, the use of chemicals and fertilizers, and even mowing and maintenance.

6. Use of mulches.

Mulch helps improve the quality of your soil, reduces weeds, and saves water. Add a 3-6 inch layer of mulch to protect plant roots from extreme temperature changes, reduce the frequency of watering, and control weeds. Mulch can also be used to visually define spaces and enhance your landscaping.

7. Ongoing maintenance.

Monthly irrigation adjustments and efficiency checks are maintenance practices that save water and keep your garden looking beautiful.



Local Gardens

Although the District Demonstration Gardens have more than 140 species of plants there are hundreds more that you might choose for your garden. The gardens listed below are well worth a visit.

1. Alice Keck Park Memorial Garden

A city block bounded by Santa Barbara, Arrellaga, Garden, and Micheltorena Streets, Santa Barbara. This 4.6-acre informal park emphasizes exotic flora. The planting areas are separated according to cultural conditions, ranging from boggy to arid, with a special section of low-water using plants. A plant directory is near the center of the park, above the pond. Open 8:00 a.m. to sunset every day. Free.

2. Firescape

2411 Stanwood Drive/Route 192 (corner of Mission Ridge Road), Santa Barbara, 564-5703. Located across the street from Fire Station #7, this 1.7-acre labeled model garden demonstrates how risks of wildfire can be reduced through appropriate planting, irrigation, and management. Open 8:00 a.m. to sunset every day. Free.

3. Goleta Street Medians

More than 20 large street medians have been landscaped in a variety of styles with climate appropriate plants. These medians serve as examples for landscaping border strips at residential and commercial sites. To view these landscapes, visit the following areas: Hollister Avenue from Puente Drive to Fairview Avenue, Cathedral Oaks Road from Patterson Avenue to Brandon Drive, Hollister Avenue at Storke Road, north Fairview Avenue and south Patterson Avenue.

4. Montecito Water District

583 San Ysidro Road (above East Valley Road), Montecito, 969-2271. A labeled garden featuring a variety of low-water using Mediterranean plants. For more information visit www.montecitowater.com.

5. Santa Barbara Botanic Garden

1212 Mission Canyon Road, Santa Barbara, 682-4726. A 65-acre garden of native plants of California, representing a variety of plant communities and important botanical and horticultural collections. The Home Demonstration Garden is a working model of year-round drought-tolerant landscaping for residential settings. The Garden Growers' Nursery sells native and Mediterranean plants every day except Monday and Wednesday. Numerous classes on drought-tolerant planting and landscaping. For more information visit www.sbbg.org.

6. Santa Barbara City College

Lifescape Garden/Chumash Point Ethnobotanic Preserve 721 Cliff Drive, Santa Barbara, 965-0581. The Lifescape Garden features a variety of low water using and edible plants, as well as composting systems and efficient irrigation. Chumash Point emphasizes native plants from the range of the Chumash Indians. These plants have medicinal, nutritional and spiritual importance to the Chumash. Open sunrise to sunset every day. Free.

7. Santa Barbara Historical Museum

136 E. De La Guerra Street (at the corner of Santa Barbara Street), Santa Barbara, 966-1601. Small, award-winning, unlabeled cactus and succulent gardens in the courtyard and in front of the museum. Courtyard is open during museum hours, For more information visit www.sbhistorical.org.



4699 Hollister Avenue
Goleta, California 93110
www.GoletaWater.com

