

California Gardening

<http://cagardenweb.ucdavis.edu>

Gardening Basics | How do I practice sustainable gardening?

Garden Design and Selection of Materials

Sustainable gardening includes all plants and hardscape (walkways, structures, etc.) in the landscape. It begins by designing the landscape in a way that reduces the seven environmental impacts listed above. For example, planting species that are adapted to your region and that use less water, and grouping plant types that use similar amounts of water together on separate irrigation valves can save water. Many Mediterranean and California native species can get by with little water once established. Lawns can use up to 3 to 4 times as much water as drought-tolerant species, so reducing the size of your lawn to the minimum space you need will also conserve water. Many people are eliminating lawns entirely. Lawns throughout the state require the use of large amounts of fossil fuels in power mowers and in hauling away the green waste, and air quality is greatly impacted by the use of vast numbers of mower engines. Finally, lawns often require much more pesticide and fertilizer inputs than most drought-tolerant plant species.

When you choose plants for your garden, be sure to select plants that are well adapted to your climate zone and those that are not considered invasive species. Look for plants such as the [UC Arboretum All-Stars](#) or check [Plant-Right](#) for non-invasive and garden-adapted plants. If you already have invasive species of plants in your garden such as Ivy (*Hedera helix*), Vinca (*Vinca major*), Pampas grass (*Cortaderia selloana*) or others known to be invasive, take action and replace those species with adapted non-invasive species. Ask your local [UC Master Gardener](#) or nursery person for suggestions.

Another design feature includes the use of low-volume irrigation where feasible, such as drip and micro sprinkler. Consider using a “smart” controller that uses weather or soil information to determine how much water to apply. The goals are to use less water and to prevent runoff water from leaving your irrigated area and moving into the storm water system. This runoff can carry pesticides and fertilizers into rivers and streams and negatively impact riparian and marine ecosystems. Request your local water district to visit your site to calculate the efficiency of your irrigation systems and determine how to make improvements.

An important way to reduce off-site green waste removal is to design the garden so that plants are not crowded when mature, so less pruning is required. This may mean planting farther apart and using wood chip mulch to reduce weed growth until the plants fill in. Consider including an on-site compost area to reuse the non-woody plant waste. If you do include a lawn in your garden design, plan to mow with a mulching mower and leave the clippings on the lawn. With a mulching mower, blades of the turfgrass are chopped fine and filter down into the soil over time as compost.

Landscapes can be used to help sustain certain wildlife and insects, and choosing the right plant species may enhance pest management. Many flowers attract insect predators and parasites that feed on insect pests, possibly reducing the need for insecticides. For example, flowers of common yarrow (*Achillea millefolium*) and California buckwheat (*Eriogonum fasciculatum foliolosum*) attract beneficial hoverflies and tiny parasitic wasps. These and other plant species also attract butterflies, native bees, and hummingbirds.

When possible, use hardscape materials that are porous, recycled and/or derived from local sources, and consider reusing on-site waste, such as broken concrete for retaining walls or walkways. Instead of solid concrete walkways or driveways, use pavers that allow water to drain in between, or use pervious concrete or other permeable materials to increase water infiltration into the soil and reduce runoff.

[Maintenance Practices](#)

[Complete Paper](#)

The [California Gardening](#) web site provides detailed information on sustainable gardening.

Chuck Ingels, Farm Advisor, University of California Cooperative Extension, Sacramento County and Pam Geisel, Director, UC Statewide Master Gardener Program.

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