

SIX ELEMENTS OF A WATER WISE GARDEN

1. Take a Watershed Approach

- A natural watershed is a balanced sustainable system. Our local watersheds are very important but do not sustain us.
- We (in most cases) rely on imported water, but imported and local water supplies can vary with rainfall and climate change. Conservation is a particularly important water resource for Central California as it reduces demand on imported supplies.
- Water, energy and air quality are tied together in California. Approximately 20% of California's energy use is water related – to move, treat, heat and deliver water to our taps and hoses.
- Water wise gardens create a sense of place in the southern California watershed.
- Central California has hot dry summers and cool wet winters with approximately 14-inches of rain per year. Water wise plants are adapted to this climate and weather pattern.
- Your landscape's water requirement is determined by climate, plants, and type of soil.
- Evapotranspiration (ET) is the amount of water that evaporates from the soil surface and is transpired by plants through the foliage during a certain time period. It is a way to compare the water needs of different plants.
- Cool season grass is the baseline ET (100% ET); medium and low ET plants need less water. Low ET plants are drought tolerant and may only need 20% of ET.
- Some plants have adapted to lower water use: leaves are leathery, small, silver/hairy, or solar tracking.

2. Build a Living Soil Sponge

- A living soil sponge soaks up rainwater and is rich with natural nutrients.
- Living soil needs a balance of oxygen + water + life (OWL).
- Most of what is happening with plants is below ground; there is an interactive relationship between the roots of a plant and the microorganisms in the soil.
- Encourage a SOIL PARTY! Plants send the invitation for bacteria, protozoa, nematodes, weeds, and macroarthropods (worms and bugs). All are needed to create healthy soil.

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- You can build healthy soil by aerating, adding good compost, and feeding the soil microbes. Aerate before you plant, and keep your lawn aerated regularly.
- You need mulch and compost, but they are different. With mulch, you can tell what the pieces are, while compost looks like soil.
- Healthy compost smells good. Add compost and worm castings regularly or brew compost tea for your garden. Compost tea is made by soaking or steeping compost in water. Continually mulch all bare soil and keep leaves in place where they fall. Grasscycle – leave the clippings on the lawn after you mow.

3. Evaluate Your Site

- Before you make changes, it is important to know your site.
- Think of your home as a mini-watershed with rain falling on the roof and draining towards the street or an area of the garden.
- Start by measuring your site and making a simple plan on graph paper.
- Mark areas that are hot and dry, cool and shady, or windy. These are microclimates.
- Note the plants you want to keep and their needs (water, exposure, growth habit, etc.)
- Note your soil conditions. Try a percolation test to see if your soil is a brick or a sponge. Test it to see if it is clay, silt, sand or some combination.
- Map water on the site – high and low spots, downspouts. How does water flow on your site? Check for signs of water damage, moss, discoloration.
- Find your water meter and check for leaks.
- Map your sprinkler system – controller, valves, and sprinkler heads.
- Run the system and for each valve, note which sprinklers come on and type of irrigation (pop-up or fixed spray, rotors, rotators, soaker hose, drip, bubblers).
- Watch for problems that waste water: runoff, broken heads, sunken heads, blocked spray, misting.
- Write down the controller's watering program for each valve – days, minutes.

4. Right Plant, Right Place

- Water wise gardens have climate appropriate plants (they like hot dry summers and cool wet winters).
- Native and Mediterranean plants are water wise and thrive in Central California's climate.
- Native plants invite pollinators that are good for edible gardens.

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- Plants naturally co-exist in communities; recreate those communities in your garden. Select different plants that like to live together because they have the same requirements for sun or shade, water needs (ET), root depth, soil type, and hardiness or temperature adaptation.
- Note hydrozones on your sprinkler map. Lawn (high ET) is watered differently than native shrub beds (low ET), edible gardens (medium ET). Mixing plants with different ET rates in one hydrozone wastes water.
- Avoid invasive plant species!
- Make sure your landscape is fire safe.
- Cool season turf is high ET. Think about using warm season turf (medium ET) or lawn alternatives (low ET).
- Plant as though your garden is mature, leaving sufficient space between new plants for future growth. Cover all bare soil with mulch.
- Check your local water agency for information on water wise plants, design ideas, tips.

5. Rainwater as a Resource

- Instead of letting rainwater drain off your property, find ways to slow it, spread it, and sink it.
- For a 1,000 square foot roof, 1-inch of rain = 600 gallons of fresh water for your garden.
- Use a rain barrel or redirect downspouts to a rain garden or swale. Grade and contour the land to capture rainwater away from the house and let it sink in.
- Change hardscape to add some permeable areas. Cut strips in existing driveways and break up concrete patios. Reuse the concrete as permeable pavers.
- Trees and mulch naturally slow and sink rainwater. Plant trees at least 10 feet from the house to protect the foundation from roots. Cover all bare soil with 2-4-inches of mulch.

6. Manage Your Irrigation

- Check your soil by hand to see if it is dry.
- Turn on the system, check components, and make adjustments or repairs.
- Consider converting from spray to drip or fixed spray to rotating nozzles.
- Turn back your irrigation timer when you turn back the clock in fall – reduce total run time by up to 50% and turn off your irrigation in the winter months.
- Install a smart controller and use a weather station or soil moisture sensor to determine when to water.
- Check the irrigation system pressure. High pressure causes breaks and misting and wastes water.

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- Adjust and repair sprinkler heads, eliminate runoff. Install heads with check valves to keep water from draining out of the irrigation system at low points in the garden.
- Modify your irrigation system or replant an area if a valve is watering different hydrozones.
- Create a custom watering schedule on Bewaterwise.com. Program your controller to water only at night. Use Cycle/Soak functions for spray irrigation times exceeding 5 minutes to avoid runoff.
- Reduce irrigation times by 20% for ALL STATIONS – put your garden on a water diet. Utilize low-flow multi-stream-multi-trajectory rotators or drip irrigation, but avoid 1/4-inch “spaghetti” lines that easily clog or break.
- Setback all spray-type irrigation at least 24-inches from hard surfaces and buildings. Avoid spray irrigation in areas less than 10 feet wide.
- Check your local water agency website for possible rebates on controllers and nozzles.