

A Guide to the Basic Care of Your New Landscape



CALVIN CRAIG LANDSCAPING

2380 West Shell Avenue, Martinez, CA 94553

CA Contractor License # 545003

www.CraigLandscaping.com

calvincraig@comcast.net

925-935-5269 office

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WARRANTY

All plants purchased and installed by us are guaranteed for one year except annual flowers, which are guaranteed for 90 days in season. We cannot be responsible for plant loss due to a fault in an irrigation system that we did not install, animal damage, microbial damage and fungal damage acquired after installation, over- or under-watering (unless we manage the irrigation) or other such problems, though we will do our best to prevent them. We also cannot guarantee 100% control of weed or pest problems. Some areas may require retreatment, and will be billed as an extra, unless otherwise stated. We do not guarantee that certain invasive plants we remove will not return, such as bamboo and ivy, these persistent plants almost always require periodic removal over several years.

All hard-scape work, such as irrigation and woodwork, has a one year guarantee for defective material or installation only if installed by Calvin C. Craig Landscaping or his subcontractor. Vandalism, normal wear, power failures, and “acts of God” are not covered. As irrigation must to be adjusted as the plants mature, we will be happy to come and adjust as needed during the first two years. Please call us when you need it adjusted.

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IRRIGATION

This is one of the most important systems to pay attention to in your landscape. Too little or too much water can stress or kill the plants. It is best to vary how often you water instead of how much you water each time, **you should soak the ground deeply every time you water.**

When to Water: The soil should be irrigated as plants and soil dry out, wind and heat increase drying. New plants, shallow rooted plants like annual flowers, and water loving plants will need more frequent irrigation. **Check to see if the soil is moist several inches below the surface** with a shovel before watering. Often people think they need to water when the top feels dry and wind up watering too often, killing their plants. Another indicator is when plants begin to wilt and leaves feel hot to touch on a warm day; a lawn will have a dull sheen, won't spring back quickly. Change your irrigation incrementally, to allow plants to adjust to changes. Do not go immediately from bad irrigation habits to good ones, as your plants will have become addicted to shallow watering.

Watering Depth: irrigate the soil to a **depth of 8 inches**, 2 to 3 feet for large trees and shrubs. Deep watering encourages deep rooting, resilience, and drought resistance. This may take **several sequential irrigations to avoid any runoff water.** Irrigation should stop prior to

run off and start again in an hour or two. If you need to irrigate for 30 minutes but it runs off after 12, try 3 irrigation sessions of 10 minutes with time to soak in between irrigations.

New Plantings: will require frequent irrigation until established, this typically takes about a year. Root balls may dry out faster than surrounding soil. Irrigate daily for the first week after planting. Next, irrigate once every other day, less often if cool weather returns. After a rainy season, cut this back to every third day with a longer duration. You may need to supplement with hand watering if only a few plants are suffering.

New Lawns: 3 times per day. After one week this gets cut down to 1x per day, the following week once every other day. Increase the duration as the roots grow deeper. As the roots get established, the lawn becomes more drought-tolerant and requires less irrigation.

Cool Season Irrigation: (70°F and below)

Typically once or twice per month if the soil is dry. You may not need to irrigate for 3 weeks or so after a heavy rainstorm. AVOID watering drought tolerant and dormant plants. Be sure to irrigate plants under eaves of your house where the rain does not fall, particularly after a light rain. Watering the day before a frost can prevent frost damage.

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Warm Season Irrigation:

Potted plants daily or every other day, depending on exposure.

Lawns and low groundcovers once per week, established fescue lawns and native ground covers can be watered less often.

Average landscape plants every one or two weeks once established

Drought tolerant, cacti, succulents, established shrubs and trees: once per month **deeply**. Some natives, summer-formant plants, and bulbs like Fremontodendron and Romneya will suffer from **any** watering during summer months.

Smart Controllers, ET (Evapo-transpiration) Weather Sensing

Irrigation Controllers: will adjust the amount of water applied according to temperature, humidity, and wind, saving water for when it is needed. These are a great tool but need to be carefully programmed to work properly. They need to be reprogrammed as the plants mature and require less frequent irrigation. With newly installed plants, you must use the “annuals” setting or 150+% ET. The controller can set each zone to serve that zone’s plants’ needs. Please refer to the owner’s manual for more information on this.

Irrigation System Maintenance: should be performed once a year, in the early spring when you are about to start irrigating again. Replace

the batteries in the controller and weather station. Make sure the controller is still programmed or reprogram. Turn on each zone (valve) and make sure the sprinklers or valves are performing. For drip systems, check that emitters are working, no water is rushing out of a break, no puddles are formed. Point-drip emitters need to be moved away from trunks 2-3 years after being installed or they can lower drought tolerance and cause crown rot fungus, killing the plant. Netafim (inline) drip systems can be left in place. Drought-tolerant plants should be taken off irrigation as they mature. Pull off unused emitters or lines and install plugs. If you notice a plant in distress check to see if the water is getting down to its roots and that it is not waterlogged, there are no rodent holes under it, and there is no girdling on the trunk. Once every 5 years clean out the main **brass strainer and filters** on drip systems, more often if using a well or non-potable water system. **Check the system again** if dry or wet spots are noticed at any time.

If water gets stuck or there is a broken main line: turn system off at main valve or backflow device (usually under green cover) or near main water pipe to house. **It is important to know where your main irrigation shut off is.** Then the pipe or valve can be cleaned or repaired.

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Typical Duration: Check depth of water percolation and runoff in your site. Sandy soil will require more frequent, shorter irrigation; Clay soil requires less frequent, longer irrigation but broken up over the day to avoid runoff.

Netafim or soaker line: 1 to 2 hours

Spray sprinklers (6' to 12'): 12-30 minutes.

Spray sprinklers (13'+): 10-15 minutes.

Large throw sprinkles and rotator nozzles (15-40'+) 30-60 minutes.

Drip emitters: ½ to 3 hours, depending on emitter rate

Mini spray (5' approx): 30-40 minutes.

Bubbler (Quadra, Octa bubbler): 5 min - 1.5+ hours depending on output.

PRUNING

The purpose for pruning is to generate or control new growth, fruit, flowers, correct poor limb placement, control size if needed, and for aesthetics. Improper pruning can damage your plants. Certain plant diseases can be transmitted by pruning tools, so keep them clean.

Perennials and dormant grasses: prune to a 4-12" mound. Penstemon to 4-6"; dormant bunch grasses to 8-12"; evergreen grasses prune only

to thin out dead leaves. Many perennials can be rejuvenated with a heavy pruning, but may not grow back too full size quickly.

Perennials which re-sprout from the ground every year: last year's growth can be cut to a couple of inches above ground level. Examples: Santa Barbara daisy, catmint, lamb's ears, coreopsis, verbena, daylilies (pruning after first bloom will usually set another bloom), gaura, some sedum, some non-woody sages, anemone, columbine, bleeding hearts, California fuchsia. The best time to prune these plants is when they are dormant just before they begin their growing season, which for many may be around February.

Shrubs: can be tipped back or sheared lightly as desired. Drought tolerant plants should only be pruned in the dry season to prevent fungal infection. Formally sheared hedges should be sheared so that they taper in toward the top or they can get leggy. Shearing shrubs require periodic thinning. Fast growers like Lavaterra, Abutilon, some Artemesia and Santolina can benefit from being tipped or sheared back once or twice during the growing season or they will become open and gangly looking. Lavenders should be deadheaded and cut back approximately 15% when they are finished blooming or around August for Spanish lavenders

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Roses and vines: greatly depends on species. Ground cover roses can be cut back to a 10" mound, some don't want to be pruned at all. Poor pruning will reduce flowering but won't usually kill the plant.

Trees: Most require little pruning, except fruit trees which need to be pruned based on how they fruit. Most trees require only a little water sprout or sucker removal (branches that grow vertically from the base of the tree or major limbs) and removal of crossed and weak branches. Thinning can increase the amount of light that gets through the upper canopy to the plants below. Crepe Myrtles will flower lower if tipped back every year to only one additional node, but this is not necessary for the plant's health. We recommend AGAINST topping and the use of sealing compounds, which have not been demonstrated to do any good. It is okay to prune up to 20% of the wood in a tree, except for some fruit trees such as peach, plum and apricot or when pollarding a Mulberry or Plane tree, these can handle more aggressive pruning. Excessive pruning can damage most trees. Prune when dormant for shape, prune when growing for size. Pine trees should have major pruning only in the winter to avoid diseases.

Lawn mowing: It is best to do this on a weekly basis when the grass is growing. Do not cut off more than 1/3rd of the height at a time, the ideal height for most lawn grasses is 2 ½ to 3 ½ inches. Taller grass will

have deeper roots and reduced evaporation, so your lawn will use less water. Do not mow when the soil is wet to avoid compacting the soil. Change your mowing pattern every time you mow to avoid ruts. Use of a mulching mower is recommended as it reduces need for fertilizer and dethatching because the lawn clippings will decompose quickly. Be careful to clean off your mower if you use it on a lawn with weeds or fungal problems. Turning your mower on its side and hosing off the bottom every time you finish mowing will prolong the life of the blades.

SOIL FERTILITY

We typically do much soil improvement in your new landscape, adding compost, which adds organic matter and beneficial microorganisms, which improve soil structure and fertility naturally. This restores the life in the soil which is the natural process of providing fertility to plants. Therefore you should not need to fertilize in the first year. Too much additional fertilizer will hurt your soil and plants. After the first year fertilize in the spring and summer only if the plants need it, for example if the leaves lose their healthy green color. Some plants, like lemons, can suffer in soils lacking certain nutrients that can be replenished with carefully selected amendments.

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Recommended Amendments: non-petrochemical, natural fertilizers such as alfalfa meal, feather meal, fish meal or emulsion, kelp extract, **compost**, and compost tea. Fertilizers with very low levels of many different minerals and inoculants are best. Avoid water-soluble fertilizers as these wash out of the soil quickly. Mycorrhizal inoculants help plant roots reach existing nutrients and moisture in the soil. Adding a woodchip mulch can use up nitrogen as it decomposes, which is great if you are trying to prevent weeds, but you may want to add compost to supplement the nitrogen in newly planted areas. Organic matter, such as mulch and compost, improves the structure of the soil too, making it easier for plants to spread their roots. Healthy soil uses up about 1 inch of organic matter per year, so we recommend adding more mulch at least every three years.

Over-fertilizing can cause a short burst of fast growth that is weak and attracts pests like deer and aphids and more prone to fungal and bacterial infections. This new growth will also need more water. Avoid fertilizers with high NPK numbers (use 2-2-2 instead of 20-20-20) because strong fertilizers can burn the roots and damage the soil. Many native or drought tolerant plants are suited for low-nutrient conditions and do not like fertilizer. Fertilizing too much can shorten the life span of some plants. Salt-based fertilizers kill beneficial

microbial activity in the soil, lowering soil fertility.

For Lawns: granular organic fertilizer such as Dr. Earth or alfalfa meal (available at most nurseries). Apply in spring and fall, right after the first and last day of frost, to feed the soil. Be sure to spread fertilizer evenly, too much fertilizer in one spot can dry out plants. Be sure to water in after applying and water more following since growth increases water use. Late fall is a great time to **aerate and over-seed thin spots and divots** which may otherwise fill in with weeds. I highly recommend **application of ¼” of compost** or compost tea once in the spring and in the fall (most critical) or de-thatching every 3rd year or so. Using compost will typically decompose the thatch.

DO NOT FERTILIZE in a drought other than with compost, compost tea, or mycorrhizal application. Fertilizer increases a plant's need for water, so it is best to fertilize during rainy weather. Only mycorrhizal applications decrease a plant's need for water by adding efficiency to a plant's root system, but these perform best when applied to moist soil. **AVOID** fertilizers with pesticides or herbicides in them, such as “Weed and Feed”, these harm soil microorganisms and distribute more toxins than using spot chemical treatments or non-chemical alternatives.

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WEED MANAGEMENT

Some perennial weeds such as broadleaf weeds will need to be pulled **with their roots** or carefully **spot treated** with boiling water, vinegar or a systemic herbicide like Roundup or Brush B Gone when actively growing. A thick layer of **mulch on cardboard** will help suppress annual weeds and will make weeding much easier. After a few years of treating weeds the population should decrease in undisturbed soil. Another method of preventing weeds is to grow plants closely so that there are no bare areas of soil for the weeds to grow in. Weed-block fabrics have many uses, but are not good at blocking weeds as weeds often grow directly on top of the fabric.

PEST AND DISEASE MANAGEMENT

Diseases such as fungal problems is typically caused by stress put on the plants by too much or too little water, too much fertilizer, the wrong amount of sun, poor air circulation, soil compaction, or pruning at the wrong time of year. Insects will be attracted to stressed plants and can spread pathogens as well. Often fungal diseases make a plant look under-watered. Make sure the soil is dry and not filled with gopher holes before you water. If the soil is wet and you have a fungus disease you can make things worse with water and fertilizer.

Diseases typically do not spread between different kinds of plants, even pests are typically specialized for a certain plant, but a stressed or weak plant will attract diseases. Often, replacing a badly infected plant may be the best way to deal with a disease outbreak.

Roses: have an amazing variety of diseases; the most important treatment for all of them is to keep the roses healthy with a good thick layer of organic mulch. Spray with compost tea if you notice black, brown or orange spots. Avoid fertilizers if there is any sign of illness, as this will prompt new weak growth that will quickly get infected. Avoid getting the leaves wet with tap water. Most rose varieties are tough and drought tolerant if left alone, not fertilized, and watered deeply but infrequently. Some varieties are not and should be replaced.

Camellia petal blight: Keep camellia petals picked up to prevent this, remove browned flowers still on the shrub.

Crown rot: keep above ground portion (trunk) exposed to air, not buried in soil or mulch. Let dry soil dry out between irrigations, this is especially important for drought tolerant plants.

Lawn rust: caused by high moisture and low nitrogen in spring. Fertilize lawn lightly, remove clippings until healthy.

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Lawn spots/ fungus: could also be insect grubs if lawn lifts up easily. Most lawn fungal problems can be prevented and alleviated or cleared up by regularly **removing thatch and aerating annually, not over-fertilizing**, and adding compost or compost tea annually. Fescue is resistant to most diseases. Mushrooms will come up if there is a lot of organic matter in the soil and are not a problem for the turf. They can be raked out if not desired. Other diseases should be diagnosed and treated accordingly. A good nursery can be helpful here. Avoid using fungicides, as these can severely damage soil fertility and lead to other diseases.

Peach leaf curl: peaches and nectarines need to be sprayed with a mild fungicide in December, January and most critically at bud break. Some species are resistant to this, such as the 'Frost' peach.

Powdery Mildew: on grapes, crepe myrtle, roses etc: wash with compost tea or rain water when leaves turn white until new growth matures, or use wet-able sulfur or organic mineral/stylet oil.

Root rot diseases: let the soil **dry between irrigations**, treat with compost tea. This is very difficult to treat chemically.

INSECTS are generally attracted by fast, weak growth caused by fertilizers and plants that are already ailing; avoid applying too much fertilizer and overwatering.

Ants: keep off fruit trees as they may spread other insect pests. Put a 2" wide band of Tree Tangle foot around the trunk of an infested tree. Ants hate cinnamon and cloves, use these to prevent entry into the house. Boric acid bait stations are mildly effective. Avoid professional spraying as these kill beneficial insects and will cause problems worse than ants.

Aphids: Aesthetic problem, do not cause significant injury to plants. Insecticides used to treat this also kill the natural predator insects making the problem worse. **Leave alone** or wash off with water or mild soap spray. You can introduce predacious lady bugs, release them at night so they do not immediately fly away, but aphids attract lady bugs on their own.

Lawn Grubs: apply beneficial nematodes or milky spore if a problem. Water less frequently to prevent grubs. Avoid poisoning them, they will quickly return. Organic lawns rarely have grubs.

Pill bugs: aka sow bug, roly poly, wood louse: a beneficial insect that decomposes dead plant tissue and improves soil quality, but can

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attack sick plants. If you find these on a plant, nocturnal slugs or snails attacked the plant during the night. Use diatomaceous earth or copper tape to prevent them from reaching affected plants.

Spider mites: generally too small to see, their presence is inferred from stippled or finely spotted leaves, usually on drought stressed plants, wash off with strong jet of water. Irrigate plants deeply.

Scale: Spray affected plants with neem oil in the late winter.

Thrips: (Stippled or finely white/black spotted leaves with microscopic white, gray, or striped narrow insects) use thrip traps, hot pepper wax spray, or neem oil. Can be very invasive for a period of time, can spread to different kinds of plants.

OTHER PESTS: High-pitch sonic devices are effective on most mammals, use motion-sensing types for above-ground animals. "Bite" marks on fruit and tender plants are often actually snail or slug damage.

Birds: use bird netting or scare devices to protect fruits, scare devices must move or be moved periodically to scare birds.

Deer: Fences over 7 feet tall work best, can be shorter on slopes; deer repellents and sonic devices work in some cases. Avoid fertilizer and

over-watering, these will make plants appealing to deer. Deer tend to have regional tastes, so look to your neighbors to see what your local deer prefer or ignore. Young deer will nibble on anything, even poisonous plants.

Gophers, voles: use ¾ inch gap steel netting to protect susceptible plants. Use traps or repellents. Moles are insectivores and do not attack plants.

Raccoons and skunks: will dig in wet soil for worms, grubs, and insects. Let soil dry between watering, treat lawns for grubs with nematodes.

Rats: use rat traps, cleanup any fruit that may be on the ground. Compost piles rarely attract rats.

Snails and slugs: Apply Sluggo or similar iron phosphate pellet snail bait when present, especially in the spring or if planting anything from seed. This kind of snail bait attracts and kills slugs and snails, but is non-toxic to humans and pets and is biodegradable. Another method is to use beer or yeast in water in a partially submerged bowl to attract and drown them, empty and refill every couple of days.

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DRAINAGE SYSTEMS

Catch basins: Keep clean. If the drains appear to not be working, run a hose through an opening or cleanouts to check for obstructions. Make sure outflow is not blocked.

Sumps: Check during large storms that water is coming out thorough outlet and not backing up in drainage areas. **Inspect every fall as the rains start** and clean out debris as needed. If pump fails, check the GFI first, and then pump for clogging.

CONCRETE

Concrete needs to be resealed every 1-5 years depending on sealer, weather, and wear from use. Clean up spilled grease, acids, leaves, and fertilizers immediately to prevent stains.

DECOMPOSED GRANITE

Decomposed Granite, DG, is a low-maintenance path material; just add to it as it wears away. Blowing un-stabilized DG will make it wear away faster. Weeds can sometimes come up, do not pull them, but cut, burn, boil, or spray them. Pulling weeds will make the stabilizer wear out faster. If you have un-stabilized DG, only stabilize it if the

path has a durable edging, otherwise the stabilizer will make the path crack and fail around the edges.

LIGHTING

Check lights yearly to make sure they are working, check their aim, and wipe off lenses. Re-set the timer as needed to adjust for daylight in systems without a light sensor. If you need to re-splice a wire use a waterproof splice. Melted connections or fuse burning out indicates a short in the system that needs correcting. Consult lighting contractor or designer prior to altering system.

When an LED eventually burns out, it must be replaced with a similar LED bulb. If an incandescent bulb goes out, consider replacing it with an LED light that fits into the same fixture, this will save electricity and money over the lifespan of the bulb. Bulb life is anywhere from 800 hours to decades depending on the bulb type. Take the burnt out bulb to a hardware store with you to check the size and power of the replacement bulb, most stores can also recycle old bulbs for you. Do not use significantly higher wattage lights then what you had before or the lights will be dim or overheat. Apply 'general purpose' grease to the bulb base to protect against corrosion. Do not touch halogen bulbs with bare fingers, this may decrease their lifespan.

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WOODWORK

Woodwork lasts longer and looks better if protected with paint, stain, or sealer. This may need to be re-applied every few years. Keeping soil from direct contact with wood will insure longevity. Clean dirt out from gaps in deck if it accumulates. Keep dirt from accumulating around fence posts.

Do not burn any wood that has had any form of sealing or paint, as this will release toxic fumes. Pressure treated lumber is especially toxic when burnt.

WATER FEATURES

Inhabited Ponds: Add beneficial bacteria monthly as per directions as per the size of your water feature. If string algae occur, add barley matting or extract. Your pond may need to be washed out every two years: remove and rinse all gravel, let dry, and wash out the filter. Remove fish and plants when using any harsh chemicals or cleaners as per direction on product. Temperature changes, such as when adding new water to pond, can harm fish, so add new water slowly. Biological filtered ponds and falls are supposed to have some water circulating 24/7 to maintain oxygen levels to keep fish and beneficial bacteria

alive. Never add chlorine bleach to a water feature, even a fountain, as chlorine may damage the finish.

Fountains: use barley straw extract to prevent algae, use extra if leaves are falling in the water. Add chloramine neutralizer and beneficial bacteria as needed. Check the skimmer monthly for debris: wash out the net and matt if needed, reassemble.

ALL STANDING WATER: apply Mosquito Dunks to prevent mosquitoes and the illnesses they can transmit. These contain a mosquito disease, will not hurt any other life in the pond. You can also try using mosquito fish if the conditions are suitable for them.