



Smart Gardening Information Sheet



FIRE-WISE GARDENING

"What I am saying is that all of us concerned with wildfires and the loss of life and property must begin addressing basic, common sense, fire prevention and fuels reduction guidelines for these areas.."

*Jack Ward Thomas, 1994
Testimony before the US Senate*

INTRODUCTION

With nearly 10,000,000 residents, the County of Los Angeles is the largest, most diverse in the nation. Our urban areas are rapidly expanding and people are building more homes in more remote areas naturally prone to periodic fires. Improper landscaping can greatly increase the risk of fire damage to both structures and property from wildfire. In most rural areas it is simply a question of when, not if, a wildfire will strike.



Figure 1
1993 Malibu Canyon Fire

During the 1993 Malibu Canyon fires, a number of homes were saved as a result of the owners' careful pruning and landscaping techniques that protected their homes. In a fire situation, the dead trees and shrubs surrounding your home act as fuel for fire. Removing flammable vegetation reduces

the threat of fire. The single most important feature that will help your home stand alone against fire and give firefighters a base to battle the flames is a fire-wise yard and garden.

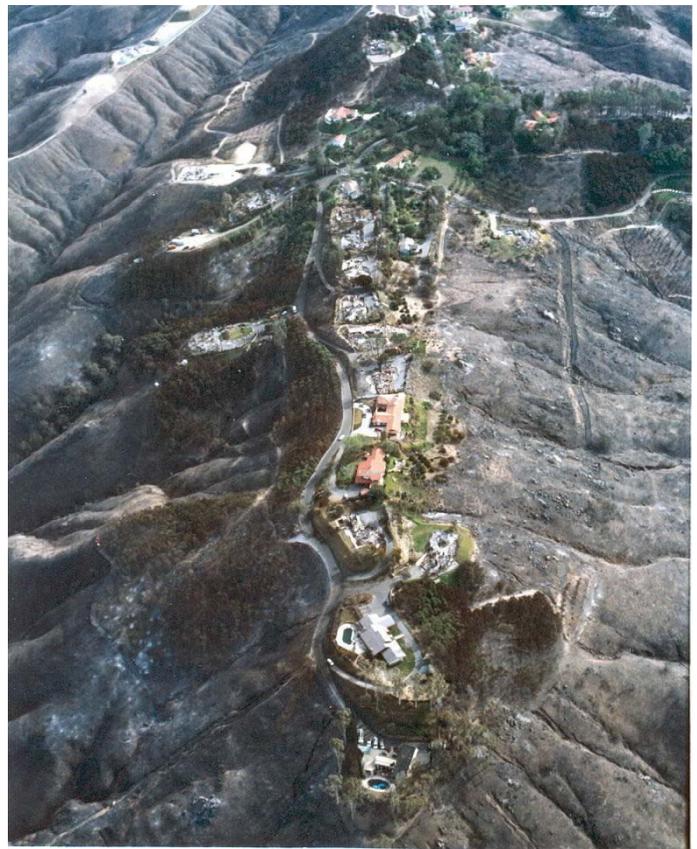


Figure 2
Homes Protected Because of Fire-wise Landscaping

FIRE-WISE GARDENING

Fire-wise gardening isn't necessarily the same thing as a well-manicured yard. Fire-wise gardening uses a combination of careful planning and preparation, plant selection and spacing, watering and maintenance to help you create a landscape better able to resist the spread of fire to your home. Fire-wise gardening doesn't require a lot of money, and you will find that a fire-wise yard and garden may increase your property value and help you conserve water, all while beautifying your home.

ASSESSING YOUR RISK

The first step in fire-wise gardening is to assess your fire risk. Look around at your property and ask yourself a few critical questions like:

- Is your home on a hill or in a canyon area?
- Are you near highly flammable native vegetation or drought-damaged ornamental plants?
- Are there many large trees surrounding your home?



Figure 3
Santa Monica Mountains Prior to 1996 Fires



Figure 4
Santa Monica Mountains After 1996 Fires

If your answer to any of these questions is yes, your fire risk is likely greater than average. The key to reducing this risk is to develop a landscaping plan designed to reduce the amount of potential fuel for fires and establish a defensible space around your home. To help you in this first, most important task, you should consider consulting a local nursery or landscape contractor to help plan your landscape.

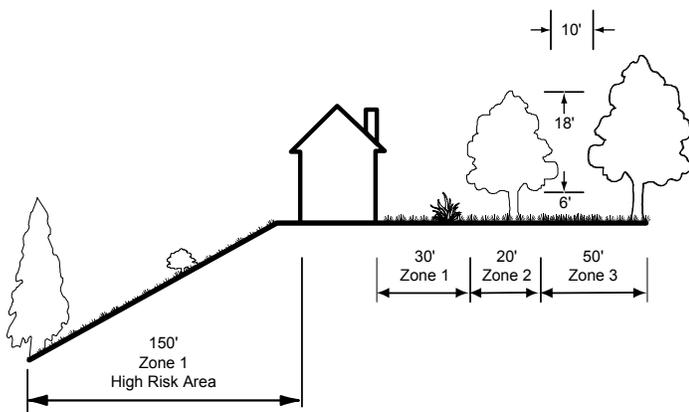
FIRE-WISE GARDENING ZONES

To create a fire-safe landscape, the primary goal is fuel reduction. Gardeners should landscape using the fire-wise gardening "zone" concept, which is similar to the hydrozoning approach to water-wise gardening. Fire-wise zone 1 is the area closest to your home and other structures. Fire-wise zones 2 and 3 are located progressively further away.

- Zone 1. This well-irrigated area encircles the structure for at least 30' on all sides, providing a defensible space for fire suppression equipment in the event of an emergency. In high fire risk areas, like canyons and ridge lines, this zone increases to 150', especially on the downhill side of lots. Plantings should be limited to carefully spaced fire-resistant species. Trees and shrubs

should be no closer than 15', and trees should be spaced at least 30' (or 3 times their diameter) apart at maturity. Trees over 18' tall should be pruned to remove all limbs within 6' of the ground, trees under 18' should be pruned to 1/3 their height. All trees should be trimmed to keep at least 10' away from roof or chimneys. Shrubs should be no higher than 18". All loose debris should be removed on a regular basis.

- Zone 2. This zone extends at least 20' beyond Zone 1 and plants should generally be low-growing, fire-resistant species and the irrigation system should extend into this section. Any trees or shrubs should be spaced at least 10' apart and trees over 18' tall should be pruned to remove all limbs within 6' of the ground, trees and shrubs under 18' should be pruned to 1/3 their height. All loose debris should be removed on a regular basis.
- Zone 3. This furthest zone extends at least 50' beyond Zone 2 and is a slightly modified natural area. Thin selectively here, and remove highly flammable vegetation and all loose debris on a regular basis.



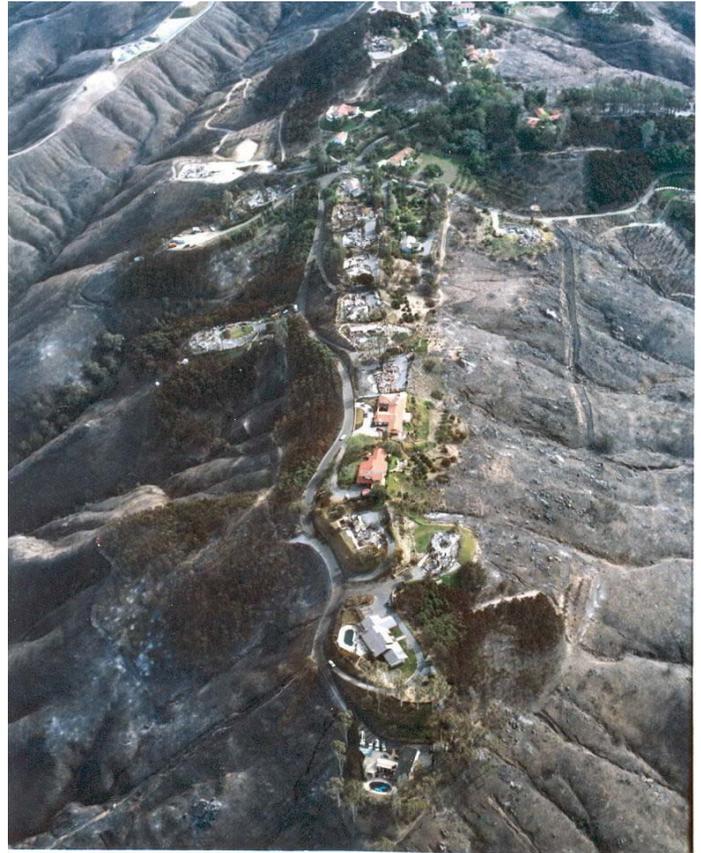
Fire-wise Zones

PLANT SELECTION

Things gardeners should consider when choosing plants for a fire-safe landscape.

- Local area fire history
- Site location and overall terrain
- Prevailing winds and seasonal weather
- Property contours and boundaries
- Native vegetation

- Plant characteristics and placement (water and salt retention ability, aromatic oils, fuel load per area, and size)
- Irrigation requirements



**Figure 5
Homes Saved by Using
Fire-wise Gardening Methods**

WATERING

- Choose the right irrigation system. While all plants will eventually burn, healthy green plants burn less quickly. Your plant selection and water availability will determine the right system for you.
- Consider drip irrigation for watering most of your landscape. It's effective and conserves water because it targets where the water goes and how much gets there.
- Use sprinklers for lawns or turf landscaping. Drip irrigation does not work well on lawns. Sprinklers on timers ensure your lawn is getting the right amount of water to keep it healthy and fire resistant.

FIRE-WISE LANDSCAPE MATERIALS

- Check your local nursery or the attached plant list for advice on fire resistant plants well suited to our area.
- Create fire-safe zones with stone walls, patios, swimming pools, decks and roadways.
- Use rock, mulch, flower beds and gardens as ground cover for bare spaces and as effective firebreaks.
- There are no "fire-proof" plants. Select high moisture plants that grow close to the ground and have a low sap or resin content.
- Choose fire resistant plant species that resist ignition, such as rockrose, ice plant and aloe.
- Fire-resistant shrubs include hedging roses, bush honeysuckles, currant, cotoneaster, sumac and shrub apples.
- Plant hardwood, maple, poplar and cherry trees that are less flammable than pine, fir and other conifers.

MAINTAIN YOUR FIRE-WISE GARDEN

- Maintain a well-pruned and watered landscape to serve as a green belt and protection against fire.
- Keep plants healthy, clean and green during the dry season and use supplemental irrigation, as necessary. On a regular basis, remove dead branches, leaves and pine needles from your yard. These can serve as added fuel to a fire.
- Trim grass on a regular basis up to 100 feet surrounding your home. Prune and thin shrubs, trees and other plants regularly to minimize the fuel load.
- Stack firewood at least 30 feet from your home.



Figure 6
Don't Stack Firewood Next to Your Home

- Involve your gardener. If a gardener cares for your property, ask him or her to include these regular maintenance steps as part of the routine service.
- Compost your yard and garden wastes and use compost and mulch around plants, in planting beds and along walkways. Grass recycling is another time- and money-saving way to make your green waste work for you.
- Store flammable materials, liquids and solvents in metal containers outside the home at least 30 feet away from structures and wooden fences.
- Locate LPG tanks (butane and propane) at least 30 feet from any structure and surround them with 10 feet of clearance.
- No matter where you live, always install smoke alarms on every level of your home. Test them monthly and change the batteries at least once a year. Consider installing the new long-life smoke alarms.



Figure 7
Proper Maintenance is a Key Element of Fire-wise Gardening

EMERGENCY WATER SUPPLY

Maintain an emergency water supply, that meets fire department standards, through one of the following:

- a community water/hydrant system;
- a cooperative emergency storage tank with neighbors;
- a minimum storage supply of 2,500 gallons on your property.

Clearly mark all emergency water sources and maintain easy firefighter access to these water sources. If your water comes from a well, consider an emergency generator to operate the pump during a power failure.

ACCESS TO YOUR HOUSE

You should know at least two exit routes from your neighborhood in case of emergency evacuation. Make sure that any road leading up to your house allows two-way traffic, is not too steep and does not have curves too sharp to accommodate large emergency vehicles. Driveways and bridges must be strong enough to carry heavy emergency vehicles, including bulldozers carried on large trucks. Make sure dead-end roads and long driveways have turnaround areas that are wide enough for emergency vehicles.

Your house address and street name should be printed in numbers and letters that are at least four inches tall, on contrasting color background. They should be visible from all directions of travel for at least 150 feet to allow emergency crews to locate your house quickly and easily. Check with your local fire department or the County Fire Department to be sure that your street name and house number are not duplicated elsewhere in the county. If your house is set back from your street or road, post your address at the entrance of your driveway.

EMERGENCY PREPAREDNESS

Store at least a three-day supply of drinking water and food that does not require refrigeration and generally does not need cooking. * Store first aid supplies, portable radio, flashlight, emergency cooking equipment, portable lanterns and batteries in an easy to access location. Prepare a list of valuables to take with you in case of evacuation; if possible, store these valuables together to save time later. Pre-plan an escape route from your home and neighborhood. Designate an emergency meeting place for the reunion of family members escaping in separate vehicles, and establish a contact point to communicate with concerned relatives. Practice emergency exit drills regularly.

Fire-wise Plant List

Groundcovers			
Botanical Name	Common Name	Botanical Name	Common Name
<i>Achillea tomentosa</i> var. Moonshine	Woolly yarrow	<i>Malephora crocea</i>	Ice plant, Croceum ice plant
<i>Ajuga reptans</i>	Carpet bugle	<i>Malephora luteola</i>	Yellow trailing ice plant
<i>Arctotheca calendula</i>	Silver spreader	<i>Myoporum parvifolium prostrata</i>	Creeping boobyalla, Myoporum
<i>Armeria maritima</i>	Thrift, Common thrift	<i>Oenothera berlandieri</i>	Mexican evening primrose
<i>Carpobrotus edulis</i>	Ice plant, Hottentot fig, Sea fig	<i>Osteospermum fruticosum</i>	Trailing South African daisy, Freeway daisy
<i>Cerastium tomentosum</i>	Snow in summer	<i>Pelargonium peltatum</i>	Ivy geranium
<i>Cistus villosus prostratus</i> (C.salviifolius)	Purple rockrose, Prostrate rockrose	<i>Phyla nodiflora</i> Lippia	Lippia
<i>Coprosma kirkii</i>	Creeping coprosma	<i>Portulacaria afra</i>	Purslane tree, Elephant's food
<i>Cotoneaster dammerii</i>	Bearberry cotoneaster	<i>Potentilla tabernaemontanii</i> (P.verna)	Spring cinquefoil
<i>Crassula argentea</i>	Jade plant	<i>Scaevola 'Muave Clusters'</i>	Fan flower
<i>Crassula lactea</i>	Crassula	<i>Sedum brevifolium</i>	Stonecrop
<i>Crassula multiclava</i>	Crassula	<i>Sedum confusum</i>	Stonecrop, Sedum
<i>Crassula tetragona</i>	Crassula	<i>Sedum rubrotinctum</i> (S. guatemalense)	Brown bean, Pork and beans
<i>Delosperma alba</i>	White trailing ice plant	<i>Sedum spathulifolium</i>	Stonecrop
<i>Drosanthemum floribundum rosea</i>	Ice plant, Rosea ice plant	<i>Symphoricarpos mollis</i>	Waxberry, Creeping snowberry, Trip vine
<i>Drosanthemum hispidum</i>	Rosea ice plant	<i>Thymus pseudolanuginosus</i> (T.lanuginosus)	Woolly thyme, Thyme
<i>Drosanthemum speciosum</i>	Drosanthemum, Dew flower	<i>Trachelospermum jasminoides</i>	Star jasmine
<i>Duchesnea indica</i>	Mock strawberry	<i>Trifolium fragiferum</i>	O'Connor's legume
<i>Dymondia margaretae</i>	Dymondia	<i>Vinca major</i>	Periwinkle
<i>Erigeron karvinskianus</i>	Santa Barbara daisy, Fleabane	<i>Vinca minor</i>	Dwarf periwinkle myrtle, Dwarf running myrtle
<i>Eschscholzia californica</i>	California poppy		
<i>Festuca rubra</i>	Creeping red fescue		
<i>Fragaria chiloensis</i>	Wild strawberry, Sand strawberry, ornamental		
<i>Gazania ringens leucolaena</i> (G. uniflora)	Trailing gazania		
<i>Gazania uniflora</i> (G.ringens leucolaena)	Trailing gazania		
<i>Grindelia stricta</i>	Gum plant, Coastal wild gum		
<i>Heuchera maxima</i>	Island alum root, Coral bells		
<i>Iberis sempervirens</i>	Evergreen candytuft, Edging candytuft		
<i>Lampranthus aurantiacus</i>	Trailing ice plant, bush gold, bush ice plant		
<i>Lampranthus filicaulis</i>	Redondo creeper		
<i>Lampranthus spectabilis</i>	Trailing ice plant		
<i>Lantana camara & cultivars</i>	Trailing lantana, Yellow sage		
<i>Lippia canescens</i>	Carpet grass, Lippia		
<i>Liriope gigantea</i>	Giant turf lily		
<i>Lonicera japonica 'Halliana'</i>	Hall's honeysuckle		

Fire-wise Plant List

Vines	
Botanical Name	Common Name
<i>Campsis radicans</i>	Trumpet vine, Trumpet creeper
<i>Solanum jasminoides</i>	Potato vine
<i>Tecomaria capensis</i>	Cape honeysuckle

Shrubs			
Botanical Name	Common Name	Botanical Name	Common Name
<i>Achillea millefolium</i> 'White'	White yarrow	<i>Isomeris arborea</i> (Cleome isomeris)	Bladderpod, Bladderbush, Burrofat
<i>Aeonium decorum</i>	Aeonium	<i>Kniphofia uvaria</i>	Red hot poker
<i>Aeonium simsii</i>	Aeonium	<i>Ligustrum texanum</i>	Texas privet
<i>Agapanthus</i> 'Peter Pan'	Lily of the Nile, dwarf	<i>Limonium perezii</i>	Statice, Marsh rosemary, Sea lavender
<i>Agave americana</i> 'Alba Picata'	Century plant	<i>Mahonia repens</i>	Creeping mahonia
<i>Agave victoriae-reginae</i>	Agave	<i>Mimulus longiflorus</i> (<i>Diplacus longiflorus</i>)	Monkey flower
<i>Aloe arborescens</i>	Torch aloe	<i>Myrica californica</i>	Wax myrtle, Pacific wax myrtle, California wax myrtle
<i>Aloe aristata</i>	Aloe, Dwarf aloe	<i>Nerine masonorum</i>	Nerine
<i>Aloe brevifolia</i>	Aloe	<i>Nerium oleander</i>	Oleander
<i>Artemisia caucasica</i>	Silver spreader	<i>Pittosporum crassifolium</i>	Dwarf karo
<i>Artemisia pycnocephala</i>	Sandhill sage	<i>Pittosporum tobira</i>	Mock orange, Wheeler's mock orange
<i>Asarum caudatum</i>	Wild ginger	<i>Prunus ilicifolia</i>	Holly-leaved cherry
<i>Atriplex canescens</i>	Four-wing saltbush	<i>Prunus lyonii</i>	Catalina cherry
<i>Atriplex lentiformis breweri</i>	Saltbush	<i>Punica granatum</i>	Pomegranate
<i>Atriplex semibaccata</i>	Saltbush	<i>Punica granatum</i> 'Nana'	Dwarf pomegranate
<i>Ceanothus thyrsiflorus</i>	Blueblossom	<i>Pyracantha</i> 'Santa Cruz'	Pyracantha, Firethorn
<i>Centranthus ruber</i>	Red valerian, Jupiter's beard	<i>Rhamnus alaternus</i>	Italian buckthorn
<i>Cistus purpureus</i>	Orchid rockrose, Purple rockrose	<i>Rhamnus californica</i>	Coffeeberry
<i>Convolvulus cneorum</i>	Bush morning glory	<i>Rhamnus crocea</i>	Spiny redberry, Redberry, Hollyleaf redberry, Red-berried buckthorn
<i>Cotoneaster congestus</i>	Likiano	<i>Rhododendron occidentale</i>	Western azalea
<i>Dietes bicolor</i>	Wild yellow iris, African iris	<i>Rhus integrifolia</i>	Lemonade berry
<i>Dietes vegeta</i>	Fortnight lily	<i>Ribes viburnifolium</i>	Evergreen currant, Catalina perfume
<i>Diplacus longifolius</i> (<i>Mimulus</i> sp.)	Monkey flower	<i>Salvia sonomensis</i>	Sonoma sage, Creeping sage
<i>Eriodictyon trichocalyx</i>	Yerba santa, Hairy yerba santa	<i>Santolina chamaecyparissus</i>	Santolina, Lavender, Gray lavender
<i>Eriophyllum confertiflorum</i>	Golden yarrow	<i>Senecio mandraliscae</i>	Blue ice plant
<i>Eunymous fortunei radicans</i>	Winter creeper, Common winter creeper	<i>Senecio serpens</i> (<i>Kleinia repens</i>)	Senecio, Dusty miller, Blue-chalksticks
<i>Fremontodendron</i> spp.	Fremontia, Flannel bush	<i>Simmondsia chinensis</i>	Pignut, Jojoba, Goatnut
<i>Galvezia speciosa</i>	Showy Island snapdragon, Hummingbird flower	<i>Solanum xanti</i>	Purple nightshade
<i>Grindelia stricta venulosa</i>	Coastal wild gum	<i>Strelitzia reginae</i>	Bird of paradise
<i>Helichrysum petiolatum</i>	Licorice plant, Curry plant	<i>Thymus praecox articus</i>	Mother of thyme, Creeping thyme
<i>Hemerocallis</i> spp.	Daylily	<i>Trichostema lanatum</i>	Woolly blue curls, Romero
<i>Hesperaloe parviflora</i>	Red yucca	<i>Tulbaghia violacea</i>	Society garlic

Fire-wise Plant List

Trees			
Botanical Name	Common Name	Botanical Name	Common Name
<i>Aesculus californica</i>	California buckeye	<i>Macadamia hybrids</i>	Macadamia nut, Queensland nut
<i>Alnus rhombifolia</i>	White alder	<i>Metrosideros excelsus</i>	New Zealand Christmas tree, Pohutukawa
<i>Arbutus menziesii</i>	Madrone	<i>Populus spp.</i>	Aspen, Cottonwood, Poplar
<i>Arbutus unedo</i>	Strawberry tree	<i>Populus tremuloides</i>	Quaking aspen
<i>Callistemon viminalis</i>	Weeping bottlebrush	<i>Prunus spp.</i>	Plum, Peach, Cherry, Apricot, Evergreen cherry
<i>Ceratonia siliqua</i>	Carob, St. John's beard	<i>Quercus agrifolia</i>	Encina, Coast live oak, California live oak
<i>Cercis occidentalis</i>	Western redbud	<i>Rhus lancea</i>	African sumac
<i>Citrus spp.</i>	Citrus	<i>Schinus molle</i>	Peruvian pepper tree, California pepper tree
<i>Feijoa sellowiana</i>	Pineapple guava	<i>Schinus terebinthifolius</i>	Brazilian pepper tree
<i>Fraxinus spp.</i>	Ash		