

Landscape Recommendations Guide

Prepared by

Environmental Design & Protection Committee

INTRODUCTION: LANDSCAPING GOAL

There are many factors that go into designing a landscape for a residence in a community like ours. The Town of Los Altos Hills remains one of the open country areas left in the congested, expanding cities of the Bay Area. A great number of our homes border on the natural, undeveloped areas which provide a visual backdrop for much of the San Francisco Peninsula. Our goal in landscaping is to minimize the visual impact of the housing structures with plantings which blend with the natural beauty of our native surroundings.

DESIGN CONSIDERATIONS

At the time of new construction, owners are required to present a plan for managing erosion on slopes and for mitigating the impact or view of new structures from off-site. The purpose is to keep the Town looking less urban, to preserve the soil and to retain the original contours as much as possible. Future plantings and changes should continue with the same goals. The General Plan calls for landscaping to create maximum compatibility of development with the natural environment. As a general guideline, the Town recommends informal plantings. To achieve this, plant in random or staggered groups of a variety of species rather than formal rows of hedges. This method will avoid future difficulties in replacement if and when plants are killed by gophers or other problems. Frequently plantings are used to conceal the view of a structure, provide privacy, manage erosion or mitigate wind or noise. Trees are often the first thought but remember trees grow tall and wide. The bottom branches die out and what was meant to be hidden will become visible again. Additionally, our tree may now block your neighbor's view or sunlight or interfere with utility lines, while it no longer serves your original purpose. Shrubs may be a better answer. Most evergreen (non-deciduous) shrubs will top out below 20 feet and continue for years to give privacy clear to the soil level.

Other design considerations are the water needs of the plants you select. Grouping plants according to their water needs will improve their success. Water saving will be a big item of consideration as the State's population increases in the future. Water supplies are finite and we will all be required to minimize our use of landscape water in the near future. Lawns are the biggest user of water, so try to have only the amount of lawn you really need for your family use and use drought tolerant plants elsewhere. Some of the easiest drought tolerant plants are the ones that evolved here naturally. These are our own native plants. (See Table 1: Native Plants)

Also, when designing you landscape, consider the site. Is it an exposed hill or a shady valley? Use plants which are adapted to these conditions.

In Los Altos Hills, the best time to plant is in the fall at the time the rains are beginning. The soil is still warm, thereby allowing the roots to establish. The air is cooler so there won't be much

top growth and the rains will do most of the watering for you. However, if the rains are inconsistent, supplemental water will be needed. Fall planting will give your plants a head start on early spring growth. If you miss the fall planting season, winter or spring are second best and summer least favorable. The Sunset Western Garden Book is a good source of information for appropriate plantings for our climate. According to Sunset, our zone is 16. All plantings should be chosen for their adaptability to this zone.

LIVING WITH CALIFORNIA OAKS

In Los Altos Hills, we are fortunate to have many native oaks. Oaks give us shade and shelter, increase our property values, create carefree beautiful landscapes and provide food for native wildlife. Oaks are very low water and low maintenance trees. Unfortunately, inappropriate landscaping, such as lawns or high water plantings, and construction practices can seriously damage these trees. Often the damage is not evident till years later. As homeowners among these beautiful trees we are in the best position to protect and enhance our native oak resources. Careful planning and design can provide benefits for both people and oaks.

OAK ROOTS

The roots of mature oaks grow predominately within the upper 3 feet of soil. Most of the roots responsible for uptake of water and minerals are concentrated within 18 inches of the surface. Although the roots typically radiate well beyond the periphery of foliage (drip line), much of the active root system is within the drip line. Roots are sensitive to environmental change such as compacting, paving, grading and increased moisture. In summer, oaks are dormant and do not need water. During the warmer days of summer, water actually promotes the growth of soil fungi which will kill the tree very slowly (over 5 or more years). Also, the tree needs oxygen in the soil and too much water will displace the soil's oxygen.

ACTIVITIES WHICH CAN DAMAGE TREE ROOTS

SOIL COMPACTING-Frequent traffic (human, livestock, driving or parking of vehicles) within the drip line squeezes soil particles together, eliminating natural air space thereby reducing infiltration and storage of water and air.

PAVEMENT-Impermeable soil coverings restrict the amount of air, water and minerals available to the roots thus impairing root growth and function.

GRADE CHANGES-This involves either the addition or removal of soil within the drip line. Excavation (cut) can sever and expose roots. Addition (fill) can suffocate them.

TRENCHING-Trenches that cut across the drip line cut essential roots. This impairs the tree's ability to obtain water and essential elements which may cause death, die-back or gradual decline.

DRAINAGE CHANGES-Any change that causes water to collect around a tree, especially the trunk, is harmful. Likewise, a grade change that diverts a source of water that the tree depends on may cause drought stress.

SOIL CONTAMINATION-Avoid storing and discarding harmful chemicals or materials such as; herbicides, petroleum products, building materials or waste water near oaks.

LANDSCAPING-There are just a few California native plants that can be used in landscaping oak gardens. See table 1: Native Plants *'d items. It is best to keep the area within the drip line relatively open. Use plants as accents rather than ground covers. Select plants that tolerate drought and plant no closer that 10 feet to the trunk. Avoid all planting under declining oaks.

OVER FEEDING-As a general rule, native oaks should not be irrigated. Frequent irrigation displaces much of the oxygen in the soil. This can lead to reduced growth and vitality and increased susceptibility to insects and diseases. One exception, however, is during drought years. If the winter is unusually dry, supplemental deep watering in the spring or summer can compliment natural rainfall. Water the soil from halfway between the trunk and the drip line to 10-15 feet beyond. Allow the water to penetrate 18-24 inches. This may take 4-6 hours and should only be done one time per month.

MULCHING AND FERTILIZING-Keep soil surface mulched with 2-4 inches of natural leaf litter, wood chips or gravel. Do not place directly against trunk. Under such conditions, healthy oaks do no need added fertilizer. However, if leaf litter is regularly removed, you may need to fertilize. The ideal time is in the spring. Broadcast over the tree's room zone, lightly water into the soil, avoiding the area within 10 feet of the trunk. Use fertilizers high in Nitrogen (N) such as calcium nitrate, ammonia sulfate, ammonia nitrate or urea. Complete fertilizers with nitrogen, phosphorous and potassium are more expensive and generally unwarranted.

PRUNING-Large old oaks are likely to need thinning and cabling. Avoid excessive pruning, removing no more than 10-20% of the foliage in any one year. **WARNING!** Incorrect pruning can lead to serious problems. Consult a professional arborist certified by the Western Chapter of the International Society of Arboriculture.

DETECTING HEALTH PROBLEMS: SIGNS OF ADVANCED DECLINE OR DECAY

- Thin, sparse foliage
- Poor growth
- Yellow, undersized leaves
- Dead branches and limbs in upper canopy
- Wilted, brown leaves during spring and summer
- Many short shoots growing on trunk and branches
- Mushrooms at tree base or on the roots in fall or early winter
- Conks – shell-like mushrooms on trunk
- Cavities in trunk
- White, fan-shaped mats of fungus under the bark at soil line

- Soft, punchy wood
- Wet, oozing areas on the bark

If any of these problems occur, residents should contact a certified arborist.

RIPARIAN HABITAT

The stream corridor, including the vegetation along the bank, is known as riparian habitat. This high moisture environment supports a great diversity of plants and wildlife. The corridor is an invaluable natural resource that serves as a conduit for floodwater, replenishes surface and ground water and contributes a host of aesthetic and recreational benefits. By protecting and preserving this delicate area you can prevent or minimize erosion, preserve water quality, contribute to the survival of fish and wildlife and help avoid flood damage. Your primary goals along stream areas are to minimize erosion or contamination from adjacent properties and preserve the natural state of the area by restoring any damaged areas with native plants. The following guidelines will help protect and enhance your living stream.

Always use native plants (No invasive or non-native plants). (See Table1: Native Plants) and (Table 2: Invasive plants).

Keep pets and livestock away from the riparian area.

Never use fertilizers or pesticides near the riparian zone.

Protect existing vegetation and natural grades during construction.

Control erosion by protecting areas where flowing water meets bare soil. This may be accomplished by reducing the speed or redirecting the water to vegetated areas or by replanting with native ground cover.

Do not rake up leaf litter or prune native plants.

Do not dump yard wastes into stream area.

PROBLEMS IN THE HILLS

Our community because of its setting on the edge of natural areas has some special challenges. Fire protection, erosion and flood control can be aided by the use of appropriate plantings. Our abundant wildlife must be protected from poisonous plants and chemicals, but must also be considered in plant selections that attract rodents, deer or raccoons.

EROSION AND FLOOD CONTROL

Soil stability can be promoted by avoiding and controlling water runoff. Limit the amount of hardscape (asphalt, concrete and other impermeable pavement) to avoid rapid run-off of large amounts of water. Landscape irrigation of a slope is equivalent to 25-60 inches of rainfall per

year. Over-watering, the cause of many slope failures, can equal 100 inches of rainfall per year when the winter rains are added. Use of drip or no irrigation would be recommended on any slope.

When planting, avoid cutting into the bottom of the slope because what is above will likely be washed down. Disturb the soil as little as possible and use appropriate drought resistant plants with deep roots. Some native plants which will help are dwarf coyote bush, baccharis pilularis, some of the Ceanothus types, native bunch grasses, native roses and toyon. Natural and constructed water courses such as creeks and drainage ditches must be kept free of debris. Any areas of land that are disturbed during construction should be quickly re-vegetated; preferably with native plants with deep roots.

FIRE PROTECTION

To prevent the likelihood or severity of wildfires, create a 30 foot fuel break area around your home using vegetation that has low flammability and is low growing. Remove dead plants and clean out dead material from your living plants in such a way so that it does not accelerate erosion and flood potential. Trees should be kept a distance from any structure at least as wide as the mature crown. Additionally large shrubbery under trees can create a fire ladder allowing the flames to ignite the tree foliage. Pines, junipers, cypress and eucalyptus trees burn especially fast and should not be planted near the house.

WATER CONSERVATION

Our climate is considered a Mediterranean climate with cool, wet winters and a long dry period from May to October. Supplemental watering should begin when the rains cease (this varies from February to June but averages about May 1).

The plants that are the best adapted to do well on your sited are the ones that are native to the area closest to you. They are drought tolerant and they provide much needed wildlife value for our birds, butterflies and other creatures. (See Table 1: Native plant list).

Minimize lawn area. Grass not only demands frequent watering but is easily destroyed by tunneling animals such as gophers and moles. Instead consider drought tolerant ground covers such as various species of ceanothus, a rock garden or a meadow of wildflowers. If lawn is functionally required, use a drought tolerant species. The optimum landscape design for water conservation would include no more than 1/3 high water use plantings, 1/3 moderate and 1/3 low water use plantings.

INVASIVE PLANTS

Certain plants will invade into the surrounding countryside. Some invasive plants have gotten loose into roadsides and native habitats. These plants which have been introduced into California from other parts of the world have no natural enemies and spread rampantly into our open space. There they crowd out native plants and become a monoculture. This has a serious

impact on our wildlife which depends on the natural variety for food and shelter. (See Table 2: Invasive plants).

POISONOUS PLANTS

Some plants are poisonous to people and livestock. No plant which is poisonous should be allowed in any enclosure for an animal. Some of our common garden plants are poisonous if eaten by children. Most notable is Oleander which is widely planted as a drought tolerant ornamental shrub. Others include the Rhododendron family. (See Table 3: Poisonous plants).

COPING WITH WILDLIFE

We live in an urban/rural interface and as much as our plantings might attract the birds and butterflies, they also attract rodents, deer and raccoons. To protect against gophers, place a 1 inch or less wire mesh basket in the planting hole. It is almost impossible to protect lawns against moles and gophers, so take this into consideration in your overall landscape plan. Dense ground covers such as ivy, vinca and the thickets of blackberries can harbor rats. Deer protection is difficult. Much of what the deer will eat is variable and depends upon his degree of hunger. There are some plants that deer consistently do not eat. These are mostly the spiny ones and those with strong odors or fragrance but they adore plants in the rose family which includes many stone fruits. If you need to protect specific plantings, i.e. vegetable gardens, the best protection is fencing. Fences to keep deer away need to be 6 feet high or more. A double row of fences of 4 feet high and 4 feet apart will also do the trick. However, then you have a weed problem in the inter-space. At Hidden Villa, a sheep-run between the fences keeps the weeds down. Fences require a building permit. Remember, however, that wildlife needs to migrate for food and water so please leave open corridors through your property.

LANDSCAPE MAINTENANCE

New Plantings

- Watering may be needed for at least the first two summers or until the plants can make it on their own. Water only sparingly after that, remembering about the growth of soil fungi during the summer.

PRUNING AND TRIMMING

It is important to keep large trees correctly pruned to allow for safety and balance and prevent storm damage. Consult a certified arborist. Maintain our shrubbery along pathways, roadways and driveway intersections to allow proper visibility and accessibility. Also, remember your and your neighbors scenic views can disappear when trees and shrubs are not kept properly trimmed.

IRRIGATION

When using automatic or manual irrigation do not over-water creating run-off or flooding to adjacent properties. Use drip system irrigation or a soaker hose whenever possible to avoid erosion and conserve our valuable water resources. Also, remember to change automatic timers

as seasonal weather changes. Because of fluctuating high water pressure in some areas, a pressure regulator valve should be installed on your landscape watering system to prevent ruptured pipes.

WEED CONTROL

The fire district will ask you to control weed growth. Here are some recommendations to handle this often overwhelming problem. The following list is in order of preference and environmental sensitivity.

1. Mowing, string or blade trimming and grazing
2. Layers of chip mulch
3. Glyphosate sprays such as "Roundup" in open areas or "Rodeo" near water courses. Read the label carefully first and follow directions explicitly.
4. Plowing and discing will cause soil erosion from wind and water. It has also been responsible for fires (from sparks off engine or hitting rocks). Timing of turning the soil is important. If seed has already formed and dropped, rototilling will only replant seed for next year's weeds.

COMPOSTING

Composting your yard waste at home can produce valuable nutrients for your garden while decreasing the impact on landfills. Classes are available monthly in Los Altos for Los Altos Hills residents.

HERITAGE TREES

Los Altos Hills has a Heritage Tree Program, and the so designated coastal live oak at Town Hall is a fine example of such a tree. We are looking for other outstanding California Native trees that could be honored in our town. Property owners with such a tree are encouraged to contact the Town Hall office and let us know. The Environmental Design and Protection Committee with the help of an arborist will examine and consult on the tree. If there tree is suitable and healthy, an award will be given and the tree will be identified as a Heritage Tree of Los Altos Hills.

GARDENS DISPLAYING DROUGHT TOLERANT AND NATIVE PLANTINGS

- Sunset Magazine Gardens in Menlo Park
- Yerba Buena Nursery – Demonstration Garden
- Woodside Library
- Guadalupe Gardens in San Jose
- Alameda County Water District
- University of California at Berkeley Botanic Garden
- Tilden Botanic Garden in Berkeley
- U.C. Santa Cruz Arboretum
- DeAnza College Environmental Studies Area
- San Mateo Garden Center
- Gamble Gardens in Palo Alto

HELPFUL REFERENCE BOOKS

California Native Trees & Shrubs for Garden & Environmental Use in Southern California and Adjacent Areas-Lee W. Lenz & John Dourley, Rancho Santa Ana Botanic Garden, Claremont, CA, 1981.

Growing California Native Plants, Marjorie G. Schmidt, 1980.

Hillsborough Water Use Classification of Landscape Species, Version 1, January 1993. On file in Los Altos Hills Town Hall.

Homeowner's Guide to Fire and Watershed Management at the Chaparral/Urban Interface, Klaus W.H. Radtke, National Foundation for Environmental Safety, Inc., 2210 Wilshire Blvd., Suite #184, Santa Monica, CA, 90403, 1982.

Landscape Plants for Western Regions, Bob Perry, Land Design Publishing, Claremont, CA 91711, 1996.

Living Among the Oaks, A Management Guide for Landowners, University of California Cooperative Extension Natural Resources Program, Berkeley, CA, (415 642-2360).

Living More Safely in the Chaparral/Urban Interface, Klaus W.H. Radtke, U.S.D.A. General Technical Report PSW-67, 1983.

Selected California Native Plants in Color, Saratoga Horticulture Foundation, Barrie D. Coate, Editor, 1980.

Streamside Planting Guide for San Mateo and Santa Clara County Streams, Coyote Creek Riparian Station, P.O. Box 1027, Alviso, CA 95002, (408 262-9204).

Sunset Western Garden Book, Lane Publishing Company (many additions available).

Success List of Water Conserving Plants, Saratoga Hotline Foundation, 1983.

Successful Perennials for the Peninsula, A Selection by Member of Western Horticulture Society, 1989.

Water-Conserving Plants and Landscapes for the Bay Area, East Bay Municipal Utility District, 1990.

**TABLE 1:
NATIVE PLANTS**

These native plants grow wild in or near Los Altos Hills and will grow easily in your garden.

TREES

Botanical Name	Common Name	Foliage
<i>Acer macrophyllum</i>	Big-leaf Maple	deciduous
<i>Aesculus californica</i>	California Buckeye	early deciduous
<i>Arbutus menziesii</i>	Madrone	evergreen
<i>Lithocarpus densiflora</i>	Tanbark Oak	evergreen
<i>Plantanus racemosa</i>	Western Sycamore	deciduous
<i>Populus fremontii</i>	Fremont Cottonwood	deciduous
<i>Pseudotsuga menziesii</i>	Douglas Fir	evergreen
<i>Quercus agrifolia</i>	Coast Live Oak	evergreen
<i>Quercus chrysolepis</i>	Canyon Oak	evergreen
<i>Quercus douglassii</i>	Blue Oak	deciduous
<i>Quercus kelloggii</i>	California Black Oak	deciduous
<i>Quercus lobata</i>	Valley Oak	deciduous
<i>Sambucus caerulea</i>	Mexican Elderberry	deciduous
<i>Sequoia sempervirens</i>	Coast Redwood	evergreen
<i>Torreya californica</i>	California Nutmeg	evergreen
<i>Umbellularia californica</i>	California Bay	evergreen

SHRUBS

Botanical Name	Common Name	Foliage
<i>Amelanchier pallida</i>	Serviceberry	deciduous
<i>Arctostaphylos andersonii</i> *	Heart-leaved Manzanita	evergreen
<i>Arctostaphylos glauca</i> *	Big-berried Manzanita	evergreen
<i>Arctostaphylos Manzanita</i>	Dr. Hurd	evergreen
<i>Baccharis pilularis</i> *	Dwarf Coyote Bush	evergreen
<i>Ceanothus cuneatus</i> *	Common Buck Brush	evergreen
<i>Ceanothus thyrsiflorus</i> *	Blue Brush	evergreen
<i>Ceanothus</i> (many species)		
<i>Cercis occidentalis</i>	Western Redbud	deciduous
<i>Cercocarpus betuloides</i> *	Mountain Mahogany	evergreen
<i>Cornus californica</i>	Creek Dogwood	deciduous
<i>Cornus grabata</i>	Brown Dogwood	deciduous
<i>Corylus cornuta californica</i>	California Hazelnut	deciduous
<i>Dendromecon rigida</i> *	Bush Poppy	evergreen
<i>Diplacus aurantiacus Mimulus</i> *	Sticky Monkey Flower	shrubby perennial
<i>Fremontodendron</i> *	Flannel Bush	evergreen
<i>Garrya elliptica</i>	Coast Silktassel	evergreen
<i>Heteromeles arbutifolia</i>	Toyon	evergreen
<i>Holodiscus discolor</i>	Cream Bush	deciduous

<i>Lepechinia calycina</i>	Pitcher Sage	evergreen aromatic
<i>Lonicera involucrata</i>	Hairy Honeysuckle	evergreen
<i>Mahonia pinnata</i> *	Shinyleaf Barberry	evergreen
<i>Malacothamnus arcuatus</i>	Northern malacothamnus	evergreen
<i>Myrica californica</i>	Wax Myrtle	evergreen
<i>Oemlaria cerasiformis</i>	Oso Berry	deciduous
<i>Physocarpus capitus</i>	Pacific Ninebark	deciduous
<i>Prunus ilicifolia</i> *	Hollyleaf Cherry	evergreen
<i>Rhamnus californica</i> *	Coffeeberry	evergreen
<i>Ribes aureum</i> *	Golden Currant	deciduous
<i>Ribes sanguieum</i>	Red Flowering Currant	deciduous
<i>Ribes Speciosum</i>	Fuchia Flowering Gooseberry	deciduous
<i>Rosa californica</i> *	California Rose	deciduous
<i>Salvia leucophylla</i>	Purple Sage	deer proof
<i>Salvia sonomensis</i> *	Sage	perennial
<i>Symphoricarpos albus</i>	Common Snowberry	deciduous
<i>Symphoricarpos mollis</i>	Creeping Snowberry	deciduous
<i>Trichostemma lanatum</i>	Wooly Blue Curls	evergreen

Low Growing Native Plants

Botanical Name	Common Name	Foliage
<i>America maritima</i>	Sea Pink	evergreen
<i>Clarkia ameona (Godetia)</i>	Farwell-to-Spring	annual
<i>Eriogonum fasciculatum</i> *	California Buckwheat	evergreen
<i>Eriogonum grande</i> *	Red Buckwheat	evergreen
<i>Eschscholzia calironica</i>	California Poppy	annual
<i>Heuchera sanguinea</i>	Coral Bells	evergreen
<i>I. douglasiana, innominata</i>	Pacific Coast Iris	evergreen
<i>Zauchneria</i>	California Fuchsia	deciduous
(<i>epilobium canum</i>)		

Native Grasses

Botanical Name	Common Name	Foliage
<i>Elymus glaucus</i>	Blue lyme grass	perennial/sun
<i>Festuca californica</i>	California Fescue	grasses/shade
<i>Melica torreyana</i>		grasses/shade
<i>Nessella cernua</i>	nodding needle grass	bunching/sun
<i>Nessella pulchra</i>	purple needle grass	bunching/sun

*Native plans for under oak trees

**TABLE #2:
Invasive Plants**

These are plants which seed themselves into wild areas and which will eventually crowd out native plants and reduce natural foods for our birds, insects and other animals. Please avoid planting these and try to remove existing plants where possible.

<u>Botanical Name</u>	<u>Common Name</u>
Ailanthus	Tree of Heaven
Arundo donax	Giant Reed
Cortaderia jubata	Pampus Grass
Cotoneaster spp.	Cotoneaster
Cytisus	French, Scotch or Spanish Broom
Eucalyptus globulus	Blue Gum Eucalyptus
Hedera canariensis	Algerian Ivy
Pennisetum	Fountain Grass
Pyracantha spp.	Pyracantha
Rubus procerus	Himalayan Blackberry
Tamarix	Tamarisk
Vinca major	Periwinkle

*Also included are any non-native plants which have berries or which spread by rhizomes.

It is especially important to keep the above plants from entering waterways.

**TABLE #3:
Poisonous Plants**

These must be kept out of animal enclosures along pathways.

Arrowgrass	
Black Henbane	
Black Locust	Knotweed
Bladder Pod	Lambkill
Bluebonnet*	Lantana*
Blue-green Algae	Larkspur*
Boxwood	Laurel*
Bracken Fern	Laurel Cherry
Broomcorn	Lily of the Valley*
Burr Clover*	Locoweed
Buckeye*	Mallow*
Castor Bean*	Nightshade*
Cheeseweed	Milkweed
Cherry Laurel*	Nightshade*
Choke Cherry*	Oaks*

Climbing Bittersweet
Cockleburr*
Coffeebean*
Corn Cockle
Cotalaris*
Coyote Tobacco*
Creeping Ivy*
Curly Dock*
Death Cammas
Desert Tobacco
Ergot
Fanwood
Fiddleneck
Fitweed
Flax*
Goatweed
Golden Corydalis*
Grimsel
Ground Ivy*
Groundsel
Horse Nettle
Horsetail*
Indian Hemp
Ivy Bush*
Jasmine*
Jeruselum Cherry*
Jimson Weed
Johnson Grass*
Johnswort
Klamanth Weed
Knapweed

Oleanders*
Old Man in Spring
Pennygrass
Pigweed*
Plum Tree*
Poison Hemlock*
Privet Hedge*
Purple Sesband
Rabbit Bush or Brush
Ragweed*
Rattlebox
Rayless Goldenrod*
Raywort*
Rough Pea
Russian Knapweed
St. Johnswort*
Seasbane
Senecio
Sneezeweed
Sorghum
Sour Dock*
Staggergrass
Star of Bethlehem*
Star Thistle
Stink Grass
Tansy
Teaweed
Tree Tabacco*
Vetch
Water Hemlock*
Wold Cherries
Yew*

* Plants used for landscaping around homes along driveways and fence lines
Published by Spur Magazine, June 1990