

## CITY OF CARMEL BY THE SEA RECOMMENDED TREE SPECIES LIST

An urban forest is an ecosystem that operates as a result of multiple interactions among vegetation, soils, water, insects, wildlife, climate, anthropogenic surfaces, and people. The goal of the Forest and Beach Commission is to manage that operation for the improvement of the urban forest and the quality of life of the City's residents.

Our forest is based on the concept of a two-story canopy consisting of native and indigenous trees and is one that the Commission feels is essential for the continuation of Carmel's forest.

Monterey pines (*Pinus radiata*) and cypresses (*Cypressus macrocarpa*) are the primary upper canopy trees of the forest and the planting of these species shall receive the greatest priority in appropriate situations. Coast live oak (*Quercus agrifolia*) is the preferred lower canopy tree. In general, the native indigenous trees (pine, cypress, and oaks) will do well planted at any location throughout the City.

### **Pinus radita – “Monterey Pine”**

An attractive pine that creates the forested character of our village. A fast growing native species, which naturally occurs along the coast of central California, and can rapidly attain 70-100 feet. It is best suited to coastal landscapes where it becomes drought tolerant. Monterey pine has the form of a pyramid, but at maturity develops a rounded or flatish crown. Accepts lots of water, but can get overgrown and die at early ages, therefore, watering should be limited to the first few years after planting. (**Native, evergreen, upper canopy tree**).

### **Cupressus macrocarpa – “Monterey Cypress”**

Stately and conical when young. At maturity attains heights of 40 feet and more, and as wide. With supplemental water, it produces amazing growth. Planted away from the coast, it is susceptible to canker fungus. Fog and wind conditions will allow proper development and freedom from canker. (**Native, evergreen, upper canopy tree**).

### **Quercus agrifolia – “Coast Live Oak”**

Evergreen tree, developing a broad round dome from 30-60 feet high, 35-80 feet wide. Fast growing when young, especially with ample water. Supplemental watering of mature trees is not recommended. Native to coast ranges from Mendocino to San Diego counties. Has greedy roots and drops almost all of its old leaves in early spring. It is a magnificent year-round cover for small gardens. (**Native, evergreen, lower canopy tree**).

A healthy forest requires a variety of tree species to preclude a single disease from causing irreversible damage. Therefore, the following list of tree species, including growth characteristics, is provided for those circumstances where one of the preferred tree species is not appropriate. Native species are favored. The following trees have proved successful in our community given the proper growing conditions.

## **UPPER CANOPY TREES**

### **Evergreen**

**Pinus radita** – “**Monterey Pine**” - see description above.

**Cupressus macrocarpa** – “**Monterey Cypress**” - see description above.

### **Pinus muricata** – “**Bishop Pine**”

Native to the northern coast. Rapid growth to 40 – 50 feet. Tolerates wind and salt air. Disease resistant, can grow in pure sand. (Native upper canopy tree).

### **Pinus canariensis** – “**Canary Island Pine**”

Native to the Canary Islands. Is a handsome tree that grows to 60-80 feet tall. Long (9-12inch) blue-green needles. Somewhat gawky appearance as a very young tree changing to a slender pyramid shape, finally developing a round canopy with tiered limbs at maturity. Drought tolerant and resistant to oak root fungus. (Upper canopy tree).

### **Cedrus deodara** – “**Deodar Cedar**”

Moderate growth to 50-60 feet with 30 foot spread at ground level. Very graceful tree with a light texture. Needs infrequent but deep watering and regular fertilization. Prefers sunny warm locations. (Upper canopy tree).

### **Sequoia sempervirens** - “**Coast Redwood**”

Fast growing with ample water and good drainage. One of the best upper canopy trees planted next to a lawn. Will grow to 50-60 feet in our area, tops usually die as a result of coastal wind. Relatively pest-free. (Native upper canopy tree).

### **Eucalyptus nicholii** – “**Peppermint Gum**”

Graceful, weeping, vertical evergreen tree that is fast growing to 40 feet. A garden tree with fine textured foliage. Crushed leaves smell like peppermint. (Upper canopy tree).

### **Deciduous**

### **Platanus racemosa** – “**California Sycamore**”

Native to stream banks. Fast growing to 60 feet. Attractive patchy, buff colored bark. Deciduous with leaves remaining on until new growth starts. Generally used in informal gardens (Native lower canopy tree in coastal environments).

## **LOWER CANOPY TREES**

### **Evergreen**

**Quercus agrifolia – “Coast Live Oak”** – see description above.

**Pinus pinea – “Italian Stone Pine”**

Native to northern Mediterranean region. Moderate growth to 40 feet. Grey-green needles. Round umbrella shaped canopy in youth developing into a flat broad canopy with age. Hardy, drought tolerant tree. (Lower canopy tree).

**Lyonothamnus floribunda asplenifolius – “Catalina Ironwood”**

Moderate growth rate, 30-40 feet in height. Considered drought tolerant, however, will look much better if watered occasionally during the summer. Notable feature is its redwood colored bark that peels off in long thin strips. Grows near the coast and is very handsome when planted in groves. Needs excellent drainage. (Native lower canopy tree).

**Arbutus menziesii – “Madrone”**

Slow growing evergreen. Mature height varies with growing conditions and site. Rarely exceeds 25 feet in our area. Main feature is smooth reddish-brown bark that peels in thin flakes. Needs well-drained soil and ample water to become established. (Native, evergreen, lower canopy tree).

**Arbutus ‘Marina’**

Multi- or single stem tree growing to 20-30 feet tall. Noted for clusters of rosy pink flowers and cinnamon red bark. Good looking specimen tree that prefers acidic soils an occasional deep watering. (Evergreen lower canopy tree)

**Quercus ilex – “Holly Oak”**

Native to the Mediterranean region. Medium size tree grows to 30 feet with a round canopy. Leaves glossy green on top grey-green underneath with prickly (hence the common name) or smooth edges. Tolerates salt air and coastal conditions. Grows best in well-drained soils but can tolerate poor conditions, although growth will be slower. (Lower canopy tree)

**Schinus molle – “California Pepper Tree”**

Fast growing to 25-40 feet. Distinctive light brown, scaly bark on gnarled trunks. Evergreen tree with pale foliage. Will tolerate poor soil and drainage, wind, dust and limited water. It has a voracious root system and generates large amounts of litter. Avoid summer water. (Lower canopy tree).

**Schinus terebinthifolius - “Brazilian Pepper Tree”**

Evergreen shrub to small dome-shaped tree that grows at a moderate rate to 15-30 feet. Darker green and coarser leaf than California Pepper. It does not develop the same problems with roots and litter as the Schinus molle. Frequently used for lawn and courtyard accents. It responds well to pruning and can become a clipped screen. (Lower canopy tree).

**Umbellularia californica – “California Bay”**

Needs deep moist soil to attain a height of 25-40 feet. Dry or windswept sites cause a more shrub like appearance, which make it a good screen. Aromatic leaves used in cooking (Native lower canopy tree).

**Calocedrus decurrens – “Incense Cedar”**

Slow growing pyramidal conifer. Can grow to 80 feet, but in our coastal environment 20 feet is the norm. Tolerates poor soil, full sun and high winds. (Native lower canopy in this area).

**Olea europaea – “Olive”**

A medium sized evergreen tree (25-30 feet). Willow like foliage is a soft gray-green that combines well with most colors. With time, these trees develop into a round dome shape and have interesting gnarled trunks. Needs full sun and are tolerant of most soils. Plant fruitless variety to avoid messy litter. (Lower canopy tree).

**Eucalyptus ficifolia - “Red Flowering Eucalyptus”**

Round headed evergreen tree that grows to about 30 feet. Spectacular 1-foot clusters, can have variable colored flowers (cream, light pink, orange and red). Flowers during summer months. Good coastal tree but should not be used in lawns. (Lower canopy tree).

**Eriobotrya japonica – “Loquat”**

Grows to 15-30 feet tall and equally broad. Large, leathery and heavily veined leaves. Needs well-drained soil and is drought tolerant once established. May produce edible fruit, but is mainly used as an ornamental. (Lower canopy tree).

**Podocarpus gracilior – “Fern Pine”**

Not a true pine. Native to eastern Africa. Glossy fine-textured green leaves 2-4 inches long and ½ inch wide. Grows to 30 feet with a billowy neat rounded vase or oval canopy. Tolerates drought, poor drainage, and compacted or restricted soils. Very few pests or diseases. (Lower canopy tree)

**Tristania conferta – “Brisbane Box” (Lophostemon confertus)**

Australian native that resembles some eucalyptus species. Upright growth to 30 feet tall. Reddish brown bark peels off the trunk and limbs similar to a madrone. Large dark green oval leaves 4-6 inches long and clusters of 3-7 white colored flowers in summer. Tolerates a wide range of soils but best growth is achieved in well drained soils. (Lower canopy tree)

**Ceratonia siliqua – “Carob”**

Evergreen shrub or tree. If pruned to grow as a tree can attain a height of 30 feet and as wide. Male trees have flowers; females produce abundant one-foot leathery pods that create litter beneath the tree. Water deeply and infrequently as this tree is subject to root crown rot. (Lower canopy tree)

## Deciduous

### **Aesculus californica – “California Buckeye”**

Small single or multi-trunked tree that will grow to 15 to 20 feet. Native to dry slopes but will grow in a variety of cultural situations. Usually drop their leaves in early summer exposing its silver-gray bark and artistic structure. (Native lower canopy tree).

### **Liquidambar styraciflua – “Sweet Gum”**

Moderate growth rate with cone shape form at maturity. Deciduous trees with brilliant fall foliage. Grows to 40-feet in coastal climate, needs well-drained soil (Lower canopy tree).

### **Robinia pseudoacacia – “Black Locust”**

Deciduous tree. Fast growth to 40-70 feet with rather open, sparse-branching habit. Thorny branchlets and showy flowers form grape-like clusters. A very aggressive tree which tolerates the most adverse conditions. (Lower canopy tree).

### **Platanus acerifolia - “London Plane”**

Fast growing to 40-50 feet. Tolerant of most soils, smog, dust, and reflective heat. Deciduous tree that is fairly insect free, but subject to anthracnose, which causes early, continued leaf fall. Interesting bark texture and color. (Lower canopy tree).

**'Yarwood'** – Preferred variety due to its tolerance of poor environmental conditions and disease resistance. In addition, it exhibits fine ornamental attributes such as uniform pyramidal habit, dark green leaves and early development of attractive exfoliating bark. (Lower canopy tree).

### **Acer macrophyllum – “Big Leaf Maple”**

Deciduous tree, native to stream banks and moist canyons. Broad topped, dense shade tree that grows to 30 feet tall in our coastal area. Golden fall color. Tree produces fruit with twin wings that persist for a long time providing the tree with an interesting decorative feature. (Native lower canopy tree).

### **Ulmus parvifolia – “Chinese Elm ”**

Evergreen or deciduous according to the trees individual heredity. Very fast growth to 40 feet. Older trees have bark that sheds similar to sycamores. Makes a good patio tree, but has an aggressive root system. (Lower canopy tree).

**'Drake'** This Chinese elm variety forms a graceful, spreading, rounded canopy of long, arching, and somewhat weeping branches with two to three-inch-long, shiny, dark green, leathery leaves. The showy, exfoliating bark reveals random, mottled patterns of grey, green, orange, and brown, adding great textural and visual interest. It makes a good shade, specimen, or street tree, provided it is trained and pruned to develop a strong branch structure. (Lower canopy tree).