

Recommended Street Tree Species List

#### Introduction

Growing the urban forest canopy is a central goal of the San Francisco <u>Urban Forest Plan</u>, and the approved street tree list provides easy to understand guidance on finding trees well-suited to our unique growing conditions. The San Francisco <u>Urban Forestry Council</u> periodically reviews and updates this list of trees in collaboration with public and non-profit urban forestry stakeholders, including San Francisco Public Works, Bureau of Urban Forestry and Friends of the Urban Forest. The 2021 Street Tree List was approved by the Urban Forestry Council on June 22, 2021.

This list is intended to be used for the public realm of streets and associated spaces and plazas that are generally under the jurisdiction of Public Works. While the focus is on the streetscape, e.g., tree wells in the public sidewalks, the list makes accommodations for other areas in the public realm, e.g., "Street Parks." While this list recommends species that are known to do well in many locations in San Francisco, no tree is perfect for every potential tree planting location. This list should be used as a guideline for choosing which street tree to plant but should not be used without the help of an arborist or other tree professional. *All street tree site and species selections must be approved by Public Works before planting*.

Sections 1 and 2 of the list are focused on trees appropriate for sidewalk tree wells, and Section 3 is intended as a list of trees that have limited use cases and/or are being considered as street trees. New as of 2019, Section 4 is a list of local native tree and arborescent shrub species that are appropriate for sites in the public realm that have more space than the sidewalk planting wells, for example, stairways, "Street Parks," plazas, and sidewalk gardens, though there are cases where these species are successful in the sidewalk tree wells. The local native species on List 4 provide optimum habitat for local wildlife. Finally, a table of palms is provided. While not broadly recommended, palms may be suitable in culturally sensitive sites or sites with significant growing constraints. The application form to plant a street tree can be found at <a href="http://sfpublicworks.org/plant-street-tree.">http://sfpublicworks.org/plant-street-tree.</a>

## **Biodiversity, Habitat and Climate Change**

The City of San Francisco, like other cities around the world, has been accelerating its <u>actions and goal-setting</u> in relation to the interlinked crises of climate change and biodiversity loss. Climate change and biodiversity have figured prominently in Urban Forestry Council conversations, during which many people have advocated for planting local native trees and shrubs to support local <u>pollinators</u> and other wildlife, in order to stem the tide toward an impending global insect apocalypse. Street trees can play a role in climate mitigation and adaptation and in providing habitat for local wildlife. The 2021 approved tree list is part of the City's larger climate action strategy and can contribute to creating a truly biodiverse San Francisco.

# **Opportunities for Greening and Supporting Wildlife in the City**

In addition to <u>street trees</u>, the City provides many other programs and opportunities for supporting biodiversity and climate resilience in the urban environment. Public Works manages the <u>Street Parks Program</u> and the <u>Sidewalk Landscaping Permit</u>. Both of these programs hold great potential to install local native plants for wildlife and climate resilience. The <u>San Francisco Plant Finder</u> is a City website that provides recommended plant lists for bringing wildlife habitat into the urban environment. Consult <u>sfenvironment.org/biodiversity</u> as a portal to much more information about the city's ecology and natural heritage.

For San Franciscans who have the opportunity – whether a front or backyard or other significant space - and are keenly interested in planting a tree for local wildlife habitat, the City strongly recommends planting coast live oak trees, California buckeyes and other local native species, taking care to use seeds or plants that are produced from local San Francisco stock. Consult the City's <u>bee-friendly nurseries</u> page for sources of local native plants.

# Section 1: Tree species, varieties, and cultivars that do well in most sidewalk locations in San Francisco.

Size	Evergreen/ Deciduous	Species	Common name	Notes
Large	Evergreen	Lagunaria patersonii	primrose tree	Grows well in windy areas; pollinators.
More than		Lophostemon confertus	Brisbane box	Formerly <i>Tristania conferta</i> ; fast grower.
35' tall at		Magnolia grandiflora 'Sam Sommers,'	southern magnolia	Proven success; pollinators.
maturity		'Majestic Beauty,' 'D.D. Blanchard'		
Medium	Evergreen	Podocarpus gracilior/Afrocarpus falcatus	fern pine	Slow rooter.
20-35' tall				
at	Deciduous	Quercus suber	cork oak	Needs a large basin and wide sidewalk.
maturity		Platanus x acerifolia 'Columbia'	London plane; sycamore	Prefers wind protection; susceptible to
				anthracnose and powdery mildew; observation
				needed.
		Melaleuca quinquenervia	broad-leaf paperbark	Grows fast, dense, irregular form; prefers wind
				protection; sensitive to cold.
		Tristaniopsis laurina	tristania; water gum	Standard species only. 'Elegant' variety NOT
				recommended. Formerly known as Tristania
				laurina; slow grower – less than 6" annually;
				pollinators.
These trees	are suitable for	locations with overhead conflicts such as pov	wer lines.	
Small	Evergreen	Callistemon citrinus	lemon bottlebrush	Grows low; wide canopy and needs a wide
Less than				sidewalk; sticky flowers; pollinators.
20' tall at		Magnolia grandiflora 'Little Gem'	Little Gem magnolia	Proven success; pollinators.
maturity	Deciduous	Crataegus phaenopyrum	Washington hawthorn	Subject to pests; has thorns; may be susceptible to fire blight; pollinators.

# **Section 2: Tree species, varieties, and cultivars that do well with certain special considerations as noted;** may not be appropriate for planting broadly throughout San Francisco.

Size	Evergreen/ Deciduous	Species	Common Name	Notes
<b>Large</b> More than	Evergreen	Corymbia ficifolia	red flowering gum	Needs a very large basin and wide sidewalk; drops large seed pods; pollinators.
35' tall at maturity		Corymbia maculata/Eucalyptus m.	spotted gum	Experimental, should do well in climate; lots of mature trees doing well now.
		Hymenosporum flavum	sweetshade	Uneven performer; prefers heat, wind protection, and good drainage; pollinators.
		Lyonothamnus floribundus asplenifolius	Catalina ironwood	CA Native. Prefers heat and wind protection; prone to transplant shock; very susceptible to phytophthora.
		Metrosideros excelsa	New Zealand Christmas tree	Needs a very large basin and very wide sidewalks; pollinators.
		Quillaja saponaria	Chilean soapbark	Availability improving; thrives everywhere; pollinators.
	Deciduous	Ginkgo biloba' 'Princeton Sentry,' 'Saratoga'	ginkgo; maidenhair	Slow grower; prefers wind protection.
		Ulmus parvifolia 'Drake,'	Chinese elm	Fast grower; requires extensive pruning and maintenance.
Medium 20-35' tall at	Evergreen	Arbutus x 'Marina'	strawberry tree	Fruit drop can range from low volume to significant. May be short lived; may need to be replanted in 20-25 years; pollinators.
maturity		Cassia leptophylla	gold medallion tree	Semi-evergreen; requires extensive early maintenance.
		Eriobotrya deflexa	bronze loquat	Needs wind protection; does not perform well in sandy soils; susceptible to fire blight; pollinators.
		Magnolia doltsopa	sweet michelia	Formerly <i>Michelia doltsopa</i> ; uneven performer; grafted trees grows very slowly; prefers heat; needs wind protection; pollinators
		Melaleuca linariifolia	flax-leaf paperbark	Does well in SF.

		Olea europaea	fruitless olive	Needs a very large basin; prefers wind protection; Swan Hill and Wilsoni preferred; Cal-IPC Limited*
	Deciduous	Jacaranda mimosifolia	jacaranda	Uneven performer; prefers heat, wind protection, and good drainage; spring leaf drop.
		Koelreuteria bipinnata	Chinese flame tree	Structural failure concerns.
		Pistacia chinensis 'Keith Davey' or standard	Chinese pistache	Prefers heat and wind protection.
These tree	s are suitable fo	r locations with overhead conflicts such as	power lines.	
Small Less than 20' tall at	Evergreen	<u>Ceanothus 'Ray Hartman'</u>	California lilac tree	CA Native cultivar. Not good for narrow sidewalks; pollinators.
maturity		Laurus nobilis 'Saratoga'	Saratoga bay laurel	Uneven performer; prefers heat; needs some wind protection; susceptible to pests.
		Magnolia champaca/M. x alba	champak	Formerly <i>Michelia champaca</i> ; needs wind protection; wide sidewalk; gets powdery mildew and very slow grower; pollinators
		Pyrus kawakamii	evergreen pear	Plant only in warmest areas of city. Semi- evergreen; leaf spot/fungus likely to occur and may cause premature leaf drop; does not flower well in our climate; susceptible to fire blight.
	Deciduous	Crataegus x lavallei	Lavalle hawthorn	Appears to be less susceptible to fire blight and other pests compared to other <i>Crataegus</i> ; pollinators.

# Section 3: Tree species, varieties, and cultivars with limited use cases and potential site restrictions as noted.

Size	Evergreen/	Species	Common Name	Notes
_	Deciduous			
Large	Evergreen	Angophora costata	Sydney red gum	
More		Brachychiton acerifolius	flame tree	Semi-deciduous.
than 35'		Corymbia citriodora	Lemon-scented gum	
tall at maturity		Eucalyptus nicholii	willow-leaf peppermint	Experimental; should do well in SF climate.
maturity		Eucalyptus polyanthemos	silver dollar gum	Needs a large basin; fast grower; high maintenance; drops limbs; pollinators.
		Geijera parviflora	Australian willow	Prefers heat and needs wind protection; pollinators.
		Leucadendron argenteum	Silver leaf tree	Needs a large basin and no overhead lines.
		Pittosporum undulatum	Victorian box	Self-sows! Do not plant near natural areas or other open spaces; caution, in decline, requires further study, currently recommend planting in full shade; <a href="Cal-IPC Watch">Cal-IPC Watch</a> *
		Quercus agrifolia	coast live oak	SF Native. Typically requires large sidewalk/basin to facilitate full potential and crown development; 41 lepidoptera confirmed, 122 likely, birds
		Quercus ilex	holly oak	Needs wind protection; sidewalk space; gets powdery mildew.
		Quercus tomentella	island oak	CA Native. Availability improving; 1 confirmed, 30 likely, birds
		Quercus virginiana	southern live oak	Continue to test; doing well so far.
		Quercus wislizeni	Interior live oak	Bay Area <u>Native</u>
	Deciduous	Liriodendron tulipifera	tulip tree	Uneven performer; susceptible to aphids followed by sooty mold; requires summer water.
		<u>Platanus racemosa</u> 'Roberts'	California sycamore (Roberts)	CA Native. Large basin and wide sidewalk; 3 lepidoptera confirmed, 8 likely, birds
		Quercus coccinea	scarlet oak	Experimental.
		Quercus frainetto 'Forest Green'	Italian oak	Availability improving; more testing needed.

		Quercus phellos	willow oak	More performance testing needed; requires summer water.
		Tilia tomentosa	silver linden	Performance testing needed.
		Ulmus parvifolia x carpinifolia 'Frontier'	frontier elm	More performance testing needed.
		Ulmus propinqua 'Emerald Sunshine'	emerald sunshine elm	More performance testing needed.
		Ulmus wilsoniana 'Prospector'	prospector elm	More performance testing needed.
		Ulmus japonica x wilsoniana 'Accolade'	accolade elm	More performance testing needed.
Medium 20-35' tall	Evergreen	Agonis flexuosa 'Burgundy'	Burgundy peppermint willow	Better form and structure than other dark-leaf cultivars; fast grower.
at		Banksia integrifolia	coast banksia	Requires extensive early maintenance.
maturity		Brachychiton populneus	bottle tree	Prefers heat and wind protection; needs a large basin due to thick trunk.
		Cedrela fissilis	Brazilian cedarwood	Good results so far and needs more time; do not plant under powerlines.
		Ceiba speciosa	silk floss tree	Prefers heat, wind protection, large basins.
		Melaleuca ericifolia	swamp paperbark	Not often planted, but most look good.
		Melaleuca squamophloia	scaly paperbark	Not often planted but should do well.
		Melaleuca styphelioides	prickly-leaf paperbark	Can root poorly; prickly leaves.
		Metrosideros collina 'Springfire'	'ohi'a lehua	
		Pittosporum rhombifolium/ Auranticarpa rhombifolia	Queensland pittosporum	Use in warmer parts of the city.
		Quercus engelmannii	Engelmann oak	<u>CA Native</u> (extreme south)
		Quercus hypoleucoides	Silverleaf oak	Native to Sonoran desert biome.
		Quercus rugosa	Netleaf oak	Native to Mexico.
	Deciduous	Acer buergerianum	trident maple	Prefers heat, wind protection, and needs summer water.
		Aesculus hippocastanum	horse chestnut	Not clear if successful in SF yet; needs summer water.
		Aesculus x carnea	red horse chestnut	Gets windburn easily in summer even in protected sites; early deciduous; climate concerns; needs summer water; pollinators.

		Celtis sinensis	Chinese hackberry	Prefers heat and needs wind protection; uneven performer; gets pests.
		Corylus colurna	Turkish hazel	Not clear if successful in SF yet.
		Koelreuteria elegans ssp. formosana	Chinese flame tree	Semi-deciduous.
These trees	are suitable for	ocations with overhead conflicts such as po	wer lines.	
Small - Less than 20' tall at	Evergreen	Ceanothus 'Cliff Schmidt'; Ceanothus arboreus	California lilac tree	CA Native cultivar. Additional cultivar and standard species (currently only planting 'Ray Hartman'); insects
maturity		Elaeocarpus decipiens	Japanese blueberry	Slow growing; keep out of strong/prevailing wind; flowers but may not produce fruit at maturity.
		Eucalyptus conferruminata/E. lehmanni	bushy yate	Wide canopy; large space needed; pollinators.
		Heteromeles arbutifolia	Toyon, Christmas berry	SF Native. Local native, train early for tree form; great for sidewalk landscaping; 4 lepidoptera confirmed, 4 likely, birds
		<u>Prunus lyonii</u>	Catalina cherry	CA Native. Fruit drop may get messy; pollinators
	Deciduous	<u>Acer circinatum</u>	Vine maple	CA Native; 10 lepidoptera confirmed, 55 likely
		Prunus subhirtella 'Autumnalis'	Higan cherry	Tolerates mild winters better than other flowering cherry species.

Section 4: Local Natives - these are tree and arborescent shrub species that are appropriate for the public realm, including stairways, plazas and "Street Parks," as well as sidewalk gardens and wider sidewalks with large cut-outs.

Local native trees and shrubs are optimum for providing wildlife habitat throughout the city.

Evergreen/ Deciduous	Species	Common Name	Notes	
Evergreen	Ceanothus thyrsiflorus	California lilac	Grows quickly in the right conditions; 14 lepidoptera confirmed, 79 likely, birds and bees	
	Garrya elliptica	Silk tassel	Lyrical, hanging flowers	
	Heteromeles arbutifolia	Toyon	Beautiful red berries in late fall; 4 lepidoptera confirmed, 4 likely, birds and bees	
	Myrica (Morella) californica	California wax myrtle	Beautiful as a hedge or specimen tree; needs a moist site; 22 lepidoptera likely	
	<u>Prunus ilicifolia</u>	Holly-leafed cherry	Spectacular indigenous occurrence at the top of Bayview Hill; 4 lepidoptera confirmed, 140 likely, birds and bees	
	Rhamnus (Frangula) californica	California coffeeberry	Widely planted for attractive evergreen leaves; 10 lepidoptera confirmed, 23 likely, birds and bees	
	Quercus agrifolia	Coast live oak	San Francisco's most common native tree species; Landmark tree at 23 <sup>rd</sup> and Castro; 41 lepidoptera confirmed, 122 likely, birds and bees	
	Quercus chrysolepis	Canyon live oak	Unusual indigenous occurrence at Lake Merced; 14 lepidoptera confirmed, 165 likely, birds and bees	
Deciduous	Aesculus californica California buckeye		Landmark tree at 22 <sup>nd</sup> and Pennsylvania, McAllister and North Willard, and other locations; 2 lepidoptera confirmed, 11 likely	
	<u>Sambucus cerulea</u>	Blue elderberry	Landmark tree near Folsom Street at Bernal Heights Boulevard; 23 lepidoptera likely, birds and bees	

Information in the Notes column regarding pollinators and lepidoptera (butterflies and moths) is from the <u>Urban Forest Ecosystems Institute</u> website, the <u>Yerba Buena Chapter</u> of the California Native Plant Society, the National Wildlife Federation and the <u>Calscape</u> website.

Palms: T	Palms: These provide fewer community benefits such as shade and carbon sequestration but may be suitable given site constraints.						
Small	Butia odorata	southern jelly palm	Does well in many SF climates.				
	Cordyline australis	Cabbage tree	Needs very large basin; do not plant near natural areas.				
Medium	Archontophoenix cunninghamiana	king palm	Needs wind protection and water.				
	Brahea clara	Mexican blue palm	Does well in many SF climates.				
	Brahea edulis	Guadalupe palm	Needs a large basin.				
	Howea forsteriana	Kentia palm	Does well in many SF climates.				
	Parajubaea sunkha	Sunkha palm	Does well in many SF climates.				
	Phoenix dactylifera 'Medjool' or 'Zahidi'	date palm	Needs a large basin and wide sidewalk.				
	Syagrus romanzoffiana	queen palm	Needs heat, wind protection.				
	Trachycarpus fortunei, standard & 'Wagnerianus'	Chinese windmill palm	Does well in many SF climates.				
Large	Parajubaea torallyi	Bolivian mountain coconut palm	NEW: does well in many SF climates; big				
	Washingtonia robusta	Mexican fan palm	Prefers some warmth; Cal-IPC Moderate*				

# **Selected Resources**

# **Bee-Friendly Nurseries**

https://sfenvironment.org/plant-nurseries-bee-friendly

# California Native Plant Society, Yerba Buena Chapter

http://cnps-yerbabuena.org/

# **California Native Plant Society, Calscape**

https://calscape.org/

## **City Trees**

https://sfenvironment.org/city-trees

#### Friends of the Urban Forest

https://www.fuf.net/

#### **Green Connections**

https://sfplanning.org/project/green-connections?page=3002

#### iNaturalist

https://www.inaturalist.org/home

#### **Local Plant Nurseries**

http://sfplantfinder.org/resources.html#plant-nurseries

# **Park Forestry Improvement Program**

https://sfrecpark.org/park-improvements/2008-clean-safe-bond/park-forestry-program/

#### **SF Pollinators Portal**

https://sfenvironment.org/pollinators

# **Recreation and Open Space Element**

http://openspace.sfplanning.org/

# Right Tree, Right Place

https://www.pge.com/righttreerightplace/

#### San Francisco Plant Finder

http://sfplantfinder.org/

#### **San Francisco Trees**

http://www.sftrees.com/

# **Sidewalk Landscaping**

http://sfpublicworks.org/services/permits/sidewalk-landscaping

# **Street Parks Program**

http://sfpublicworks.org/streetparks

#### **Street Trees and Plants**

http://www.sfpublicworks.org/trees

#### StreetTreeSF

https://sfpublicworks.org/streettreesf

#### **Urban Forest Master Plan**

https://sfplanning.org/urban-forest-plan?page=3166

# **Urban Forestry Council**

https://sfenvironment.org/about/taskforce/urban-forestry-council

# **Urban Forest Ecosystems Institute**

https://ufei.calpoly.edu/

#### **USA North**

https://usanorth811.org

# **Acknowledgements**

California Native Plant Society; Flora Grubb Gardens; Friends of the Urban Forest; Mike Sullivan, author of Trees of San Francisco; San Francisco Recreation and Parks; San Francisco Public Works, Bureau of Urban Forestry; San Francisco Environment.

