

Appendix D: Vegetation Palette For Bioretention BMPs

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Low impact design (LID) offers an important opportunity to integrate San Francisco's native landscape into ongoing urban development, creating ecologically significant patches of habitat that also function as stormwater management facilities.

Introduction

Low Impact Development (LID) seeks to use natural processes to manage stormwater runoff as close as possible to its source. Bioretention is a specific tool used in LID. Bioretention is characterized by a depressed planted area designed to collect stormwater runoff from a contributing area, while utilizing the physical and chemical processes of plants, soils, and microbes to slow, store and/or convey, filter, and infiltrate stormwater runoff.

The City's LID efforts are contributing to an expanding patchwork of bioretention throughout San Francisco. This appendix describes important considerations regarding plant selection for LID and bioretention and includes a palette of climate-appropriate plants that can tolerate the periodic inundation and soil saturation characteristics of bioretention planters, basins, and swales.

The selection and installation of plants should consider climate, context, site conditions, natural plant communities and habitat. Below is an overview of these important considerations.

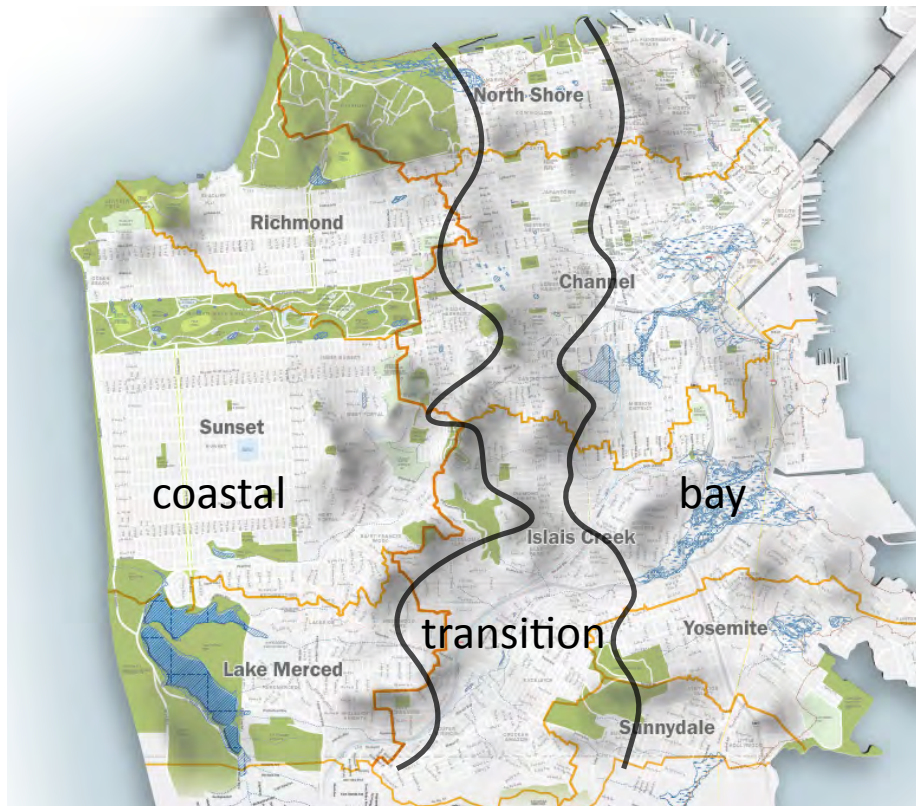


Figure D1. San Francisco climate zone map.

Climate

Located within one of the five Mediterranean zones of the world, San Francisco's climate is characterized by short, mild, wet winters and long, dry, warm summers. The coastal influence and the local topography create three general microclimates: the coastal zone to the west, the central transition zone, and the bay zone to the east (Figure D1). The coastal zone is characterized by cool temperatures, dense summer fog, salty air, and prevailing westerly winds. The transition zone is characterized by cool to moderate temperatures, light fog to clear, sunny skies, and gentler winds. The bay zone is characterized by warm temperatures, clear sunny skies, and light to high winds. Specific conditions will vary from site to site, but these broad, climatic influences can be instructive in terms of regional conditions. For example, many plant species that thrive in the chilly fog of the Richmond District might suffer in the warm sun of the Mission District. Climate zone information was developed by the San Francisco Department of Public Works (DPW).

Site Context

Urban conditions

In dense urban areas, plantings are often subject to harsh conditions, including air and water pollution, strong winds, trampling, and vandalism. To aid plant selection for sites with very harsh conditions, the following plant palette includes a column indicating which plants are recommended by the SFDPW for sidewalk landscaping and which trees are recommended as street trees. The City's urban parks, open spaces, moderate or low density residential areas, and more sheltered sites within dense urban areas are less susceptible to these harsh conditions, and successful plantings may include a wider variety of plant sensitivities.

Aesthetic goals

Each project will have its own aesthetic goals, whether referencing the architecture adjacent to the site or maintaining unity along a street. Plant selection will be determined by form, texture, foliage, and bloom color, among other qualities. Ensuring that selected plant species or cultivars are appropriate for site conditions is essential to a planting's continued health and ability to express the desired aesthetic characteristics. Considering seasonality and "look and feel" in the design process can help manage expectations of the plantings over time.



Mulch and plantings at Mint Plaza. Photo: Final citation pending



Rosa californica (California Wild Rose). Photo: Barbara Eisenstein

Maintenance

During plant selection, maintenance of both the stormwater management facility and the level of plant care must be considered. In facilities where an underdrain is required, the roots of trees and large shrubs may grow into the slots of the underdrain pipe, and may require increased maintenance and/or result in reduced performance. Many plants included in the list can survive with little or no maintenance; others need seasonal pruning, occasional thinning, and/or extra care to thrive. Trees will need structural pruning. A planting that requires regular maintenance will neither look good nor remain healthy without regular maintenance. When planning a low-maintenance planting, it is important to space plants based on mature plant sizes. For the first couple of years after planting, drought-tolerant plants put most of their energy into root growth, so new plantings will be sparse at first. While making a site look dense at first, overplanting trees and shrubs will require significant extra pruning and likely plant removal later. Filling in a site with self-seeding annuals will help a new planting look abundant within weeks, while shading the soil as the trees and shrubs mature. Annuals are not included in the following vegetation palette, but many locally native and climate appropriate species are readily available as seeds or plugs.

Site Conditions

Topography

Topography influences drainage; the top of a slope will dry more quickly as soil moisture drains downhill, while the lowest part of a slope will retain soil moisture longer. Likewise, topography influences sun exposure, as a south-facing slope will receive more sunlight than a north-facing slope. Accordingly, a south-facing slope will be more susceptible to moisture loss through evaporation. In bioretention, topography also determines the frequency and duration of inundation; plants at or near the base of a bioretention basin must tolerate more frequent inundation for longer periods than plants at or near the top.

Soils

San Francisco's native soils vary from clayey soils that drain and dry out slowly to sandy soils that drain and dry out more rapidly. Plantings in sites with naturally clayey soils will require plants that can withstand longer periods of soil saturation. Many locally native plants are adapted to this condition and have deep roots that penetrate the clay, improving drainage. Plantings in naturally sandy soils will require either supplemental irrigation beyond the plant establishment period or plants that can tolerate sustained drought. Amending the soil with compost will improve drainage in clayey soil and retention in sandy soil, while adding a consistent source of nutrients as the organic matter in the compost decomposes. Bioretention soil mixes are designed to mimic soils found in mature forests that provide storage, filtration, and drainage. Typically, they have high sand and compost contents and dry out relatively quickly.

Sun

The quality of sunlight changes seasonally and throughout each day. Afternoon sun is the hottest and most drying, and summer sunlight is stronger and hotter than winter sunlight. Many tender, shade-loving plants can survive with exposure to gentle morning sun but suffer in afternoon sun, while many sun-loving plants will grow leggy and weak in too much shade.

Water

Bioretention facilities are designed to pond during rain events and to drain quickly afterwards. Accordingly, plantings must tolerate inundation, and any plantings that are not drought-tolerant will likely need supplemental irrigation. Many plant species native to California or other Mediterranean regions are adapted to both seasonal inundation and long, dry summers and stay attractive and healthy with little or no summer irrigation. Groundcovers and herbaceous perennials and annuals can help shade the soil during dry periods, to reduce moisture loss through evaporation. Evergreen trees and shrubs will uptake moisture during the wet season, reducing ponding times in bioretention. Winter-deciduous trees and shrubs are dormant during the wet season, and provide less stormwater management benefit. The following plant palette includes a large selection of low water-use plants, as well as some moderate and high water-use plants. When planting species with a variety of water needs, it is important to hydrozone, or group plants with similar water needs together, to ensure plant health and avoid wasting water.



Acer macrophyllum (Big Leaf Maple). Photo: Barbara Eisenstein

Plant Communities and Habitat

Plant communities

Plant communities are natural assemblages of plants that commonly occur together in certain geologic and climatic conditions. San Francisco has several naturally occurring plant communities, including chaparral, coastal scrub, dunes, grassland/prairie, riparian, wetland, and oak woodland. Understanding which plant communities grow naturally in the conditions at a given site can provide a preliminary palette of well-suited plants. Referencing local plant communities can create a sense of place and help to extend the remnant patches of natural plant communities and habitats that have persisted through the urbanization of San Francisco. Plants from other areas that grow in similar conditions can be successfully incorporated into these designed plant communities.

Habitat

Bioretention can provide small linkages in the dense urban environment connecting habitat to and between large open spaces. Diverse, layered plantings with year-round food resources provide richer habitat than simpler plantings. Including local native species will help support populations of sensitive local wildlife. The following plant palette includes bloom times and identifies native species to support plant selection for local habitat creation. For further information, the San Francisco Planning Department's Green Connections Program (greenconnections.sfplanning.org) includes design guidelines for creating habitat, the "SF Plant Finder" biodiversity plant list, and "Ecology Guides" that identify target species and associated plantings to support a network of habitat corridors throughout the city.

Listed below are resources for more information about the topics covered in this section and the plants listed in the vegetation palette. The following vegetation palette includes a sampling of plants that have been successful in green infrastructure (GI) regionally and throughout the Pacific Northwest. That said, there may be many other species appropriate for such GI plantings.

Vegetation Palette

The following vegetation palette combines data from several native plant databases and major reference books to create a diverse palette specific to the San Francisco Bay Area. The criteria for including plants in the list include the following characteristics:

- Appropriate for the San Francisco Bay Area climate
- Has performed well in bioretention plantings in the Bay Area or within the Pacific Northwest
- Available in nurseries

Plants are listed alphabetically by scientific name, followed by common name and plant type, and other information including inundation zone; plant information (evergreen or deciduous, recommended by DPW as a sidewalk plant or street tree, and whether it's locally native); soil water and sun preferences; bloom time; mature size; and additional notes.

“Zone” indicates inundation zone. Zone A is the lower planting area subject to occasional flooding. Zone B is the planted area adjacent to the flooding zone that is subject to occasional saturation. Bioretention Planters are flat-bottomed, and only include Zone A (Figure D2). Bioretention Basins have sloped sides and include both planting Zone A and Zone B (Figure D3).

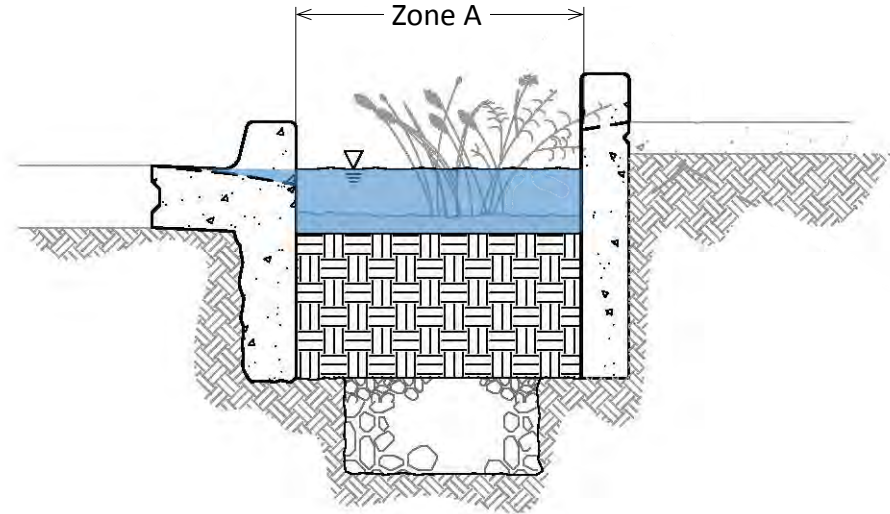


Figure D2. Bioretention planters with inundation zones.

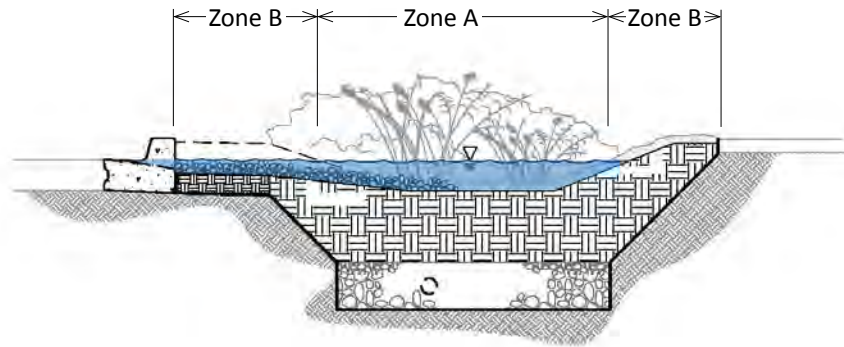


Figure D3. Bioretention basins with inundation zones.

Scientific Name	Common Name	Plant Type	Zone	Plant Info	Soil	Water	Sun	Bloom	Mature size	Notes
			Zone A Zone B	Evergreen/Deciduous DPW recommended locally native	Clay Loam Sand	WUCOLS Region #1	Full sun Partial shade Shade	Spring Summer Fall Winter	Approximate Height x Width	
Acer circinatum	vine maple	tree	•	d	•	M	• •	•	15ft x 20ft	erosion control
Acer macrophyllum	big leaf maple	tree	• •	d	• • •	M	• • •	•	30-75ft x 30-50ft	no salinity tolerance
Acer rubrum	red maple	tree	• •	d T	• • •	M	• •	•	60ft x 40ft	prefers heat, wind protection
Achillea millefolium	yarrow	perennial	•	s	• • •	L	•	• •	1-3ft, spreading	ground cover
Acmispon glaber*	common deerweed	perennial	•		• • • •	VL	•	• •	3ft x 3ft	nitrogen-fixing
Acorus gramineus	sweet flag	grass	• •		•	H	• • •	•	1ft, spreading	best in rich soil, slowly spreading
Adiantum jordanii	California maidenhair fern	fern	• •		• •	H	• •		1-2ft x 3ft	prefers moist , shady locations
Aesculus californica	California buckeye	tree	• •	d	• • • •	VL	• •	•	15-30ft x 30-40ft	prefers well-drained soil
Agrostis exarata	bentgrass	grass	• •		• • • •	?	•	•	1-4ft x 2ft	
Agrostis hallii	Hall's bentgrass	grass	•		• • • •	?	•	• •	1-2ft x 1ft	
Agrostis pallens	bentgrass	grass	• •		• • •	?	• •	•	1-2ft x 1-3ft	lawn substitute, water to keep green
Alnus rhombifolia	white alder	tree	• •	d	• • • •	H	• •	•	50ft x 40ft	avoid sidewalks
Alopecurus saccatus	Pacific foxtail	grass	• •		• •	?	•	•	1-2ft, spreading	
Amelanchier alnifolia	western serviceberry	shrub	•	d s	• • •	M	• •	•	4-20ft x 6-20ft	Regent' 4-6 ft height
Aquilegia formosa	western columbine	perennial	• •	s	• • •	L	• •	•	1-3ft x 1-2ft	
Arctostaphylos densiflora	manzanita	shrub	•	e	•	L	• •	• •	5-8ft x 5-7ft	Howard McMinn' is a reliable cultivar
Arctostaphylos tomentosa crustacea	Lake Merced brittleleaf manzanita	shrub	•	e	• •	?	• •	• •	3-4ft x 1-5ft	prefers acid to neutral soils

* indicates recent name change; DPW recommended: T - street tree (see notes), s - sidewalk
WUCOLS rating: VL - very low, L - low, M - moderate, H - high, ? - unrated

Scientific Name	Common Name	Plant Type	Zone	Plant Info	Soil	Water	Sun	Bloom	Mature size	Notes
			Zone A Zone B	Evergreen/Deciduous DPW recommended locally native	Clay Loam Sand	WUCOLS Region #1	Full sun Partial shade Shade	Spring Summer Fall Winter	Approximate Height x Width	
Arctostaphylos 'Emerald Carpet'	Emerald Carpet	shrub (groundcover)	•	e s	• •	M	• •	• •	1ft, spreading	
Aristolochia californica	pipevine	vine	•	d	• • •	L	•	• •	8ft x 12ft with support	host plant for Pipevine swallowtail butterfly
Armeria maritima	sea thrift	perennial	• •	s	• •	M	•	• •	1-2ft x 1ft	ground cover
Artemisia californica	coastal sagebrush	shrub	•	e s	• •	L	•	• • •	2-5ft x 4-7ft	
Artemisia douglasiana	mugwort	perennial	•		• •	L	• •	• •	1-3ft, spreading	provide good drainage
Asarum caudatum	wild ginger	perennial	• •	s	• •	M	• •	•	1ft, spreading	ground cover
Asclepias fascicularis	narrowleaf milkweed	perennial	• •	s	• • •	L	• •	• •	1-3ft x 2-3ft	host plant for Monarch butterfly
Asclepias speciosa	showy milkweed	perennial	• •		• • •	L	• •	•	1-3ft, spreading	host plant for Monarch butterfly
Aster radulinus	rough-leaved aster	perennial	•		• • •	M	•	• •	1-3ft x 1-2ft	
Atriplex californica	California saltbush	perennial	• •		•	VL	•	•	1-2ft x 1-2ft	
Baccharis pilularis	coyote brush	shrub	•	e s	• • •	L	•	•	7-12ft x 7-12ft	intolerant to shade
Baccharis salicifolia	mule-fat	shrub	• •	e	• • •	L	•	•	4-10ft x 8ft	intolerant to shade
Berberis aquifolium	barberry	shrub	• •	e	• •	M	• • •	• •	6ft x 5ft	
Berberis aquifolium repens*	creeping Oregon grape	shrub	• •	e s	• •	L	• •	•	1-3ft, spreading	
Berberis pinnata	California holly grape	shrub	•	e	• •	L	•	• •	4-5ft x 5ft	
Berberis thunbergii	Japanese barberry	shrub	•	d	• •	M	• •	•	4-6ft x 4-6ft	
Betula occidentalis	water birch	tree	• •	d	• •	H	•	•	12-15ft x 12-15ft	
Betula spp.	birch	tree	• •	d	• •	H	•	•	50-80ft x 40-60ft	

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			Zone A Zone B	Evergreen/Deciduous DPW recommended locally native	Clay Loam Sand	WUCOLS Region #1	Full sun Partial shade Shade	Spring Summer Fall Winter	Approximate Height x Width	
Bouteloua gracilis	blue grama	grass	•	s	• • •	?	•	•	1ft, spreading	
Bromus carinatus	California brome	grass	• •	•	• • •	?	•	• •	2-3ft x 1-2ft	
Calamagrostis nutkaensis	Pacific reedgrass	grass	• •	s	• • • •	M	• • •	• •	10ft x 10ft	
Calycanthus occidentalis	western spice bush	shrub	• •	e	•	M	•	•	10ft x 10ft	
Calystegia purpurata	morning glory	vine	•	d	•	L	• •	• • •	7ft x 7ft	requires well-drained soil
Carex barbarae	Santa Barbara sedge	emergent	• •	•	• • •	M	• •	•	1ft x 3ft	
Carex densa	dense sedge	grass-like	• •	•	• • •	M	• •	• •	1ft x 2ft	
Carex obnupta	slough sedge	emergent	• •	•	• • •	M	• •	•	4ft x 4ft	
Carex pansa	Pacific dune sedge	grass-like	• •	•	• • •	M	• •	•	1ft, spreading	
Carex praegracilis	clustered field sedge	grass-like	• •	•	• • • •	M	• •	•	1ft x 2ft	no salinity tolerance
Carex tumulicola	foothill sedge	grass	•	s	• • •	M	•	•	1ft x 3ft	lawn substitute
Carpenteria californica	bush anemone	shrub	•	e s	• •	M	• •	•	6-8ft x 6-8ft	
Carya illinoensis	pecan	tree	• •	d	• •	L	•	•	60-70ft x 40-80ft	no salinity tolerance
Casuarina cunninghamiana	river she-oak	tree	• •	d	•	L	•	• •	70ft x 30ft	good screen
Ceanothus spp.	ceanothus	shrub	•	e s	• •	L	• •	• •	2-18ft x 6-18ft	requires excellent drainage
Celtis laevigata*	common hackberry	tree	•	d	•	L	• •	• •	50ft x 40ft	
Cephalanthus occidentalis	buttonbush	shrub	• •	d	•	M	• •	•	3-15ft x 3-15ft	
Cerastium arvense	field chickweed	perennial	• •	•	• • • •	?	•	•	1ft x 1ft	

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Cercis occidentalis	western redbud	tree	•	d T	• • •	VL	• •	•	10-18ft x 10-18ft	performs well in most of SF
Cercocarpus betuloides	mountain mahogany	shrub	•	e	•	VL	•	•	10ft x 8ft	
Chamaemelum nobile	chamomile	perennial	•	s	• • •	L	• •	• •	1ft, spreading	
Chionanthus retusus	Chinese fringe tree	tree	•	d	•	?	•	• •	20ft x 16-18ft	
Chondropetalum tectorum	cape rush	grass-like	• •		• •	L	• •	• • • •	3-5ft x 4-6ft	
Cistus spp.	rockrose	shrub	•	e s	• •	L	• •	• •	2-6ft x 4-8ft	
Clematis lasiantha	pipestems; chaparral clematis	vine	•	d	• • •	L	•	•	20ft x 20ft, needs support	
Clematis ligusticifolia	western white clematis	vine	• •	d	• • •	M	•	• •	20 ft x 20 ft, needs support	erosion control along stream banks
Clinopodium douglasii*	yerba buena	perennial	•	s	• • •	L	• •	• •	1ft, spreading	can be difficult to establish
Cornus sericea	redtwig dogwood	shrub	• •	d	• • •	H	• •	•	8-12ft x 8-12ft	low salinity tolerance;
Corylus cornuta	western hazelnut	shrub or tree	• •	d	• • • •	L	• •	•	12-15ft x 12-15ft	good for slopes; no salinity
Corymbia citriodora	lemon-scented gum	tree	• •	e	• • •	L	•	• • • •	4-90ft x 15-45ft	
Delphinium californicum	California larkspur	perennial	• •		• • • •	?	•	• •	5ft x 2ft	
Deschampsia cespitosa	tufted hairgrass	grass	• •		• • • •	L	• •	•	2ft x 2ft	
Dicentra formosa	Pacific bleeding heart	perennial	• •		• • •	M	• • •	•	1ft x 2ft	ground cover
Dietes spp.	fortnight lily	perennial	•	s	• •	L	• •	• • •	2-3ft x 2-3ft	
Diospyros virginiana	persimmon	tree	• •	d	• •	L	• • •	•	15-30ft x 15-30ft	fragrant
Distichlis spicata	salt grass	grass	• •		• • •	L	•	•	1ft, spreading	intolerant to shade

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Dryopteris expansa	spreading wood fern	fern	● ●		● ●	?	● ●		2ft x 2ft	
Eleocharis macrostachya	pale spikerush	grass	● ●	●	● ● ●	H	●	●	3ft x 2ft, spreading	
Eleocharis palustris	creeping spikerush	grass	● ●		● ● ●	H	●	●	1-4ft, spreading	
Elymus glaucus	blue wild rye	grass	● ●	●	● ● ●	L	●	●	2-4ft, spreading	
Elymus trachycaulus	slender wheatgrass	grass	●		● ● ●	?	●	●	1-3ft, spreading	no shade tolerance
Elymus triticoides*	creeping wild rye	grass	● ●	●	● ● ●	L	●	●	2-4ft, spreading	
Epilobium canum & cvs.	California fuchsia	perennial	●	S	● ● ● ●	L	● ●	●	1-2ft x 3ft	many cultivars available
Equisetum hyemale	scouring rush	perennial	● ●	●	● ● ●	H	● ● ●	●	4ft, spreading	thrives in moist soils
Erigeron foliosus var. franciscensis	San Francisco leafy fleabane	perennial	●	●	● ● ● ●	?	●	● ● ●	1-3ft x 2-3ft	
Erigeron glaucus	seaside daisy	perennial	● ●	S	● ● ●	L	● ●	●	1-3ft x 1-3ft	
Eriogonum fasciculatum	California buckwheat	perennial	●	S	● ● ●	VL	●	● ● ●	2-3ft x 3-5ft	intolerant to shade
Eriogonum giganteum	St. Catherine's lace	perennial	●	S	● ● ●	VL	●	●	5ft x 6ft	prefers well-drained soils
Eriogonum latifolium	coast buckwheat	perennial	●	S	● ● ●	L	●	●	1ft x 1-2ft	
Eriogonum parvifolium	dune buckwheat	perennial	●		● ● ●	L	●	● ●	2ft x 2ft	prefers well-drained soils
Eschscholzia californica	California poppy	biennial	●	S	● ● ●	VL	●	● ●	1ft x 1ft	readily self-seeds
Eucalyptus erythrocorys	red-cap gum	tree	● ●	e	● ● ●	L	●	● ● ● ●	12-30ft x 9-25ft	
Euthamia occidentalis	western goldenrod	perennial	● ●		● ● ●	?	●	●	4ft, spreading	intolerant to shade
Festuca californica	California fescue	grass	●	S	● ● ● ●	L	●	● ●	3ft x 3ft	
Festuca idahoensis	Idaho fescue	grass	●	S	● ● ● ●	VL	● ●	●	1-2ft x 1-2ft	intolerant to shade; good slope stabilizer

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Festuca rubra	red fescue	grass	• •	s •	•	L	• •	•	1ft x 2ft, spreading	can be used as a lawn substitute
Fragaria chiloensis	coast strawberry	perennial	•	s •	•	M	• •	•	1ft x 2ft, spreading	ground cover
Fragaria vesca	woodland strawberry	perennial	•	s •	•	M	• •	•	1ft x 2ft, spreading	ground cover
Frangula californica	coffeeberry	shrub	• •	e •	• •	L	• •	•	6-10ft x 6-10ft	good screen, 'Mound San
Frankenia salina	yerba reuma; sea heath	perennial	•	•	• •	?	•	• •	1-3ft x 1-3ft	
Fraxinus latifolia	Oregon ash	tree	• •	d •	• • •	M	• •	•	40-80ft x 30-50ft	
Garrya elliptica	coast silktassel	shrub or tree	•	e •	• • •	L	• •	•	10-20ft x 10-20ft	requires good drainage; good screen
Gaultheria shallon	salal	shrub	• •	e •	• • •	M	• • •	•	2-3ft x 3ft	
Geijera parvifolia	Australian willow	tree	• •	e T	• •	M	•	•	25-30ft x 20ft	prefers heat, wind
Ginkgo biloba	maidenhair tree	tree	• •	d T	• • •	M	•	•	35-50ft x 30-40ft	performs well in most of SF
Gleditsia triacanthos 'Shademaster'	honey locust	tree	• •	d T	•	L	•	•	35-70ft x 25-35ft	prefers heat, wind protection
Grevillea robusta	silk oak	tree	•	e •	• • •	L	•	•	50-60ft x 30-35ft	intolerant to shade
Grindelia hirsutula	gumweed	perennial	• •	s •	• • •	L	• •	• •	1ft x 4ft	
Heteromeles arbutifolia	toyon	shrub	•	e •	• • •	L	•	•	10-25ft x 8-20ft	good screen
Heuchera micrantha	crevice alumroot	perennial	•	s •	• • •	M	•	• •	1-3ft x 1-2ft	grow best in rich soil
Holodiscus discolor	oceanspray, cream bush	shrub	•	d •	• • •	L	• •	• •	4-8ft x 4-8ft	can grow to 15 ft x 15 ft in rich, moist soils

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Scientific Name	Common Name	Plant Type	Zone	Plant Info	Soil	Water	Sun	Bloom	Mature size	Notes
			Zone A Zone B	Evergreen/Deciduous DPW recommended locally native	Clay Loam Sand	WUCOLS Region #1	Full sun Partial shade Shade	Spring Summer Fall Winter	Approximate Height x Width	
<i>Hordeum brachyantherum</i>	meadow barley	grass	• •		• • • •	?	•	•	2ft x 2ft	tolerates poor soils
<i>Hosackia gracilis</i>	harlequin lotus	perennial	• •		• • • •	?	•	• •	1ft x 2ft	
<i>Iris douglasiana</i>	Douglas iris; Pacific iris	perennial	• •	s	• • • •	L	• •	• •	1ft x 3ft	requires well-drained soil
<i>Juglans hindsii</i>	California black walnut	tree	• •		• • • •	M	•	•	30ft x 30ft	
<i>Juncus patens</i> & cvs.	spreading rush	grass-like	• •	s	• • • •	L	• •	•	3ft x 3ft	
<i>Juncus xiphiodes</i>	iriseaf rush	grass-like	• •		• • • •	H	• •	• •	1-3ft x 1-3ft	
<i>Koeleria macrantha</i>	prairie junegrass	grass	• •		• • • •	L	•	•	2ft x 1 ft	
<i>Lagunaria pattersonii</i>	Norfolk Island hibiscus	tree	• •	e T	• • • •	L	• •	• •	20-50ft x 20-40ft	performs well in most of SF
<i>Lavandula</i> spp. & cvs.	lavender	perennial	• •	s	• • • •	L	•	• • • •	1-3ft x 1-3ft	
<i>Limonium californicum</i>	marsh rosemary	emergent	• •		• • • •	L	•	•	2ft x 2ft	
<i>Liquidambar styraciflua</i>	American sweet gum	tree	• •	d T	• • • •	M	• •	•	60ft x 20-25ft	needs space for canopy and roots
<i>Lupinus albus</i>	silver bush lupine	shrub	• •	e s	• • • •	VL	•	•	4ft x 4ft	prefers good drainage
<i>Lupinus bicolor</i>	miniature lupine	perennial	• •		• • • •	?	•	•	1ft x 1ft	
<i>Lyonothamnus floribundus asplenifolius</i>	Catalina ironwood	tree	• •	e	• • • •	L	•	• •	20-35ft x 15ft	
<i>Magnolia grandiflora</i>	southern magnolia	tree	• •	e T	• • • •	M	• •	•	80ft x 60ft	performs well in most of SF
<i>Magnolia virginiana</i>	sweet bay	tree	• •	s	• • • •	M	• •	•	30-50ft x 20ft	
<i>Malva assurgentiflora</i>	tree mallow	shrub	• •	e	• • • •	L	•	• • •	10ft x 10ft	requires good drainage
<i>Marah oregana</i>	coastal manroot	vine	• •	d s	• • • •	?	• •	• •	12-30ft with support	

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Scientific Name	Common Name	Plant Type	Zone	Plant Info	Soil	Water	Sun	Bloom	Mature size	Notes
			Zone A Zone B	Evergreen/Deciduous DPW recommended locally native	Clay Loam Sand	WUCOLS Region #1	Full sun Partial shade Shade	Spring Summer Fall Winter	Approximate Height x Width	
Melaleuca stypheloides	black tea tree	tree	• •	e	• • •	L	•	• •	20-40ft x 10-20ft	
Melaleuca viminalis*	weeping bottle brush	tree	• •	e T	• • •	L	•	• • • •	20-30ft x 15ft	performs well in most of SF
Melaleuca viridiflora rubriflora*	cajeput tree	tree	• •	e T	• • •	L	•	• •	20-40ft x 15-25ft	performs well in most of SF
Melica californica	California melic	grass	• •		• • • •	?	• •	•	2ft x 2ft	tolerates poor soil
Melica imperfecta	coast range melic	grass	•		• • •	VL	• •	• •	2ft x 2ft	
Mimulus aurantiacus*	sticky monkeyflower	perennial	•	s	• • • •	VL	• •	• •	3-4ft x 3-4ft	
Mimulus cardinalis	scarlet monkeyflower	perennial	• •		• • •	H	• •	•	3ft x 2ft	
Mimulus guttatus	creek monkeyflower	perennial	• •		• • • •	H	•	• •	2-3ft x 2-3ft	
Miscanthus sinensis	Japanese silver grass	grass	• •		• • •	M	•	•	2-5ft x 2-6ft	
Monardella villosa	coyote mint	perennial	•	s	• • • •	VL	•	•	1-2ft x 1-2ft	
Monardella villosa franciscana	San Francisco coyote mint	perennial	•	s	• • •	?	•	• •	1-2ft x 1-2ft	requires well-drained soils
Morella californica*	Pacific wax myrtle	tree	• •	e	• • • •	M	• •	•	10-30ft x 10-30ft	informal hedge, wind break
Morus alba	white mulberry	tree	•	d	• •	M	•	•	20-40ft x 20-40ft	fruitless varieties are
Muhlenbergia rigens	deer grass	grass	•	s	• • •	L	•	•	4ft x 4ft	requires good drainage; streambank stabilization
Nepeta spp.	catmint	perennial	•	s	• • •	L	•	• •	1-3ft x 1-3ft	
Nyssa sylvatica	tupelo, black gum	tree	• •	d	• •	M	• • •	•	30-50ft x 15-25ft	
Oxalis oregana	redwood sorrel	perennial	• •		•	M	• •	•	1ft x 2ft, spreading	ground cover

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			Zone A Zone B	Evergreen/Deciduous DPW recommended locally native	Clay Loam Sand	WUCOLS Region #1	Full sun Partial shade Shade	Spring Summer Fall Winter	Approximate Height x Width	
<i>Panicum virgatum</i>	switchgrass	grass	•		• • •	M	• • •	• • • •	2-4ft x 2-4ft	
<i>Pellaea andromedaefolia</i>	coffee fern	fern	•		•	L	•		1-2ft x 1-2ft	requires good drainage
<i>Penstemon</i> spp.	penstemon	perennial	•	s •	• • •	L	• •	•	1-3ft x 1-3ft	erosion control; requires good drainage
<i>Phacelia californica</i>	California phacelia	perennial	•	s •	•	L	• •	• •	1-2ft x 1-2ft	
<i>Philadelphus lewisii</i>	native mock orange	shrub	• •	d	• • •	M	• •	• •	12ft x 8ft	
<i>Physocarpus capitatus</i>	Pacific ninebark	shrub	• •	d	• • •	L	• •	• •	6-8ft x 6-8ft	
<i>Pittosporum tobira</i>	mock orange	shrub	•	e	• • •	L	• •	•	4-15ft x 4-15ft	
<i>Plantago subnuda</i>	tall coastal plantain	perennial	• •		• • •	?	• •	• •	1ft x 1ft	
<i>Platanus occidentalis</i>	American sycamore	tree	• •	d	• • •	?	•	•	40-80ft x 30-40ft	
<i>Platanus racemosa</i>	California sycamore	tree	• •	d	• • •	M	•	• • •	30-80ft x 20-50ft	
<i>Pleuropogon californicus</i>	semaphore grass	grass	•		• •	?	•	• •	2-3ft x 1-3ft	
<i>Poa unilateralis</i>	San Francisco bluegrass	grass	• •		• • • •	?	•	•	2-3ft x 1-3ft	
<i>Polypodium scolieri</i>	leather leaf fern	fern	•		• • •	M	• • •		1ft, spreading	
<i>Polystichum munitum</i>	western sword fern	fern	•	s •	• • •	M	• •		2-4ft x 2-4ft	does best in rich soils
<i>Populus fremontii</i>	Fremont's Cottonwood	tree	• •	d	• •	M		•	40-60ft x 30ft	
<i>Prosartes hookeri</i> *	Hooker's fairy bells	perennial	•		• •	L	• • •	• • •	1-3ft x 1-2ft	good for slopes
<i>Prunella vulgaris</i>	self-heal	perennial	• •		• • •	M	• • •	•	1ft x 2ft	
<i>Prunus emarginata</i>	bitter cherry	shrub or tree	•	d •	• • •	?	•	•	3-18ft x 3-6ft	

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Scientific Name	Common Name	Plant Type	Zone	Plant Info	Soil	Water	Sun	Bloom	Mature size	Notes
			Zone A Zone B	Evergreen/Deciduous DPW recommended locally native	Clay Loam Sand	WUCOLS Region #1	Full sun Partial shade Shade	Spring Summer Fall Winter	Approximate Height x Width	
Prunus ilicifolia	holly leaf cherry	shrub or tree	•	e	• • • •	L	•	• • •	20ft x 10ft	avoid planting near sidewalk: fruit stains
Prunus spp.	flowering plum & cherry	tree	•	d T	• • • •	L-M	•	• • •	6-30ft x 4-25ft	some cultivars perform well in many SF locations
Prunus virginiana var. demissa	western chokeberry	shrub	•	d	• • • •	M	•	• • •	20-30ft x 18-25ft	good screen; erosion control
Quercus agrifolia	coast live oak	tree	•	e T	• • • •	VL	• • •	• • •	20-50ft x 30-6 ft	uneven performer as street tree
Quercus chrysolepis	canyon live oak	tree	•	e	• • • •	VL	• • • •	• • •	20-60ft x 20-60ft	erosion control
Quercus lobata	valley oak	tree	• •	d	• • • •	L	• • •	• • •	50-70ft x 60-80ft	
Quercus macrocarpa	bur oak	tree	• •	d	• • • •	M	• • •	• • •	60-70ft x 60-75ft	
Rhamnus crocea	redberry buckthorn	shrub	•	e	• • • •	?	• • •	• • •	2-3ft x 3-6ft	requires good drainage
Ribes aureum	golden currant	shrub	•	d s	• • • •	L	• • •	• • •	3-6ft x 3-6ft	
Ribes menziessi	canyon gooseberry	shrub	•	d	• • • •	VL	• • •	• • •	10ft x 7ft	
Ribes sanguineum glutinosum	red-flowering currant	shrub	•	d	• • • •	L	• • •	• • •	5-12ft x 5-12ft	
Ribes speciosum	fuchsia-flowering	shrub	•	e	• • • •	L	• • •	• • •	4-8ft x 6-10ft	
Rosa californica	California wild rose	shrub	• •	d	• • • •	L	• • • •	• • •	5-12ft x 5-12ft	excellent for bank stabilization
Rosa gymnocarpa	wood rose	shrub	•	d	• • • •	?	• • •	• • •	2-4ft x 2-4ft	
Rubus ursinus	California blackberry	shrub	• •	d	• • • •	L	• • •	• • •	1ft x 4ft, spreading	
Salix laevigata	red willow	tree	• •	d	• • • •	H	• • •	• • •	30ft x 30ft	avoid sidewalks
Salix lasiolepis	arroyo willow	tree	• •	d	• • • •	H	• • •	• • •	30ft x 20ft	avoid sidewalks

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			Zone A Zone B	Evergreen/Deciduous DPW recommended locally native	Clay Loam Sand	WUCOLS Region #1	Full sun Partial shade Shade	Spring Summer Fall Winter	Approximate Height x Width	
Salix lucida ssp. lasiandra	shining willow	tree	• •	d	• • •	H	• •	•	20-50ft x 20-30ft	avoid sidewalks
Salvia clevelandii	Cleveland sage	shrub	•	e s	• • •	L	•	•	4-6ft x 4-6ft	
Salvia leucophylla	purple sage	shrub	•	e s	• • •	L	•	•	4-6ft x 6-8ft	
Salvia spathacea	hummingbird sage	perennial	•	s	• • •	L	• •	•	2ft x 4ft	
Sambucus nigra cerulea	blue elderberry	shrub	• •	d	• • •	L	• •	• •	15-20ft x 15-20ft	
Santolina spp.	santolina	shrub	•	e s	• • •	L	•	•	2-4ft x 2-4ft	
Schoenoplectus acutus*	tule	emergent	•		• •	?	•	•	3-10ft, spreading	
Schoenoplectus americanus*	three square	emergent	• •		• •	?	•	•	3-6ft, spreading	
Schoenoplectus californicus*	bulrush	grass	• •		• • •	?	•	•	5-8ft, spreading	intolerant to shade
Schoenoplectus maritimus*	prairie bulrush	grass	•		• • •	?	•	•	4-5ft, spreading	
Scrophularia californica	bee plant; California figwort	perennial	• •	s	• • •	L	• •	• •	4ft x 4ft, spreading	erosion control
Sedum spathulifolium	broadleaf stonecrop	succulent	•	s	• • •	L	•	• •	< 1ft x 1ft	host plant for San Bruno elfin butterfly
Senecio hydrophilus	alkali marsh ragwort	perennial	• •		• • •	?	• •	• •	2-5ft x 1-3ft	
Sidalcea malviflora	checkerbloom	perennial	•		• • •	M	•	• •	1ft x 1ft	
Sisyrinchium bellum	blue-eyed grass	perennial	• •		• • •	VL	• •	•	1ft x 1ft	
Sisyrinchium californicum	yellow-eyed grass	perennial	•		• • •	VL	• •	• •	1-2ft x 1-2ft	prefers moist conditions
Solanum umbelliferum	nightshade	perennial	•		• • •	VL	•	• • •	1-2ft x 1-2ft	

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<i>Solidago spathulata</i>	coast goldenrod	perennial	•	s	• • • •	VL	• •	• •	2ft x 2ft	
<i>Solidago velutina californica</i>	California goldenrod	perennial	•	s	• • • •	VL	• •	• •	2-4ft x 2-4ft	
<i>Stachys byzantina</i>	lambs ears	perennial	•	s	• • • •	VL	• •	• •	1-2ft, spreading	
<i>Stipa lepida</i> *	foothill needlegrass	grass	• •		• •	VL	•	•	3ft x 2ft	tolerates poor soils
<i>Stipa pulchra</i> *	purple needlegrass	grass	• •	•	• • •	VL	•	•	3ft x 2ft	
<i>Symphoricarpos albus</i>	common snowberry	shrub	• •	d s	• • •	VL	•	•	4-6ft x 4-6ft	prefers heavy, clay soils
<i>Thuja occidentalis</i>	American arborvitae	tree	• •	e	• •	VL	• • •	•	30-60ft x 10-15ft	
<i>Thymus pseudolanuginosus</i>	wooly thyme	perennial	•	s	• • • •	VL	• •	•	< 1ft x 3ft	
<i>Tristanopsis laurina</i> *	water gum	tree	• •	e T	• • • •	VL	•	•	30-45ft x 20-30ft	performs well in most of SF
<i>Typha latifolia</i>	common cattail	perennial	•		• • • •	?	•	•	7-12ft, spreading	
<i>Umbellularia californica</i>	California bay laurel	tree	• •	e	• • •	VL	• • •	•	50-75ft x 75-100ft	good for open spaces, avoid sidewalks
<i>Vaccinium ovatum</i>	California huckleberry	shrub	•	e	• • •	M	• • •	• •	3-10ft x 3-10ft	
<i>Vitis californica</i> 'Roger's Red'	California wild grape	vine	• •	d	• • •	L	• •	•	up to 30ft	
<i>Woodwardia fimbriata</i>	giant chain fern	fern	• •		• • •	M	• •		4-5ft x 3ft	

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Trees

Note: In facilities where an underdrain is required, the roots of trees and large shrubs may grow into the slots of the underdrain pipe, and may require increased maintenance and/or result in reduced performance.

Acer circinatum, vine maple
 Acer macrophyllum, big leaf maple
 Acer rubrum, red maple
 Aesculus californica, California buckeye
 Alnus rhombifolia, white alder
 Betula occidentalis, water birch
 Betula species, birch
 Carya illinoensis, pecan
 Casuarina cunninghamiana, river she-oak
 Celtis laevigata, common hackberry
 Cercis occidentalis, western redbud
 Chionanthus retusus, Chinese fringe tree
 Corymbia citriodora, lemon-scented gum
 Diospyros virginiana, persimmon
 Eucalyptus erythrocorys, red-cap gum
 Fraxinus latifolia, Oregon ash
 Geijera parvifolia, Australian willow
 Ginkgo biloba, maidenhair tree
 Gleditsia triacanthos 'Shademaster', honey locust
 Grevillea robusta, silk oak
 Juglans hindsii, California black walnut
 Lagunaria pattersonii, Norfolk Island hibiscus tree
 Liquidambar styraciflua, American sweet gum
 Lyonothamnus floribundus asplenifolius, Catalina ironwood
 Magnolia grandiflora cultivars, southern magnolia
 Magnolia virginia, sweet bay
 Melaleuca stypheloides, black tea tree
 Melaleuca viminalis, weeping bottle brush
 Melaleuca viridiflora rubriflora, cajeput tree
 Morella californica, Pacific wax myrtle
 Morus alba, white mulberry
 Nyssa sylvatica, tupelo, black gum
 Platanus occidentalis, American sycamore
 Platanus racemosa, California sycamore
 Populus fremontii, Fremont's Cottonwood
 Prunus spp., flowering plum & cherry
 Quercus agrifolia, coast live oak
 Quercus chrysolepis, canyon live oak

Quercus lobata, valley oak
 Quercus macrocarpa, bur oak
 Salix laevigata, red willow
 Salix lasiolepis, arroyo willow
 Salix lucida ssp. Lasiandra, shining willow
 Thuja occidentalis, American arborvitae
 Tristaniopsis laurina, water gum
 Umbellularia californica, California bay laurel
 Quercus macrocarpa, bur oak



Fremontedendron californicum. Photo: Barbara Eisenstein

Shrubs

Note: In facilities where an underdrain is required, the roots of trees and large shrubs may grow into the slots of the underdrain pipe, and may require increased maintenance and/or result in reduced performance.

Amelanchier alnifolia, western serviceberry
 Arctostaphylos densiflora, manzanita
 Arctostaphylos tomentosa crustacean, Lake Merced brittleleaf manzanita
 Arctostaphylos 'Emerald Carpet', Emerald Carpet
 Artemisia californica, coastal sagebrush
 Baccharis pilularis, coyote brush
 Baccharis salicifolia, mule-fat
 Berberis aquifolium, barberry
 Berberis aquifolium repens, creeping Oregon grape
 Berberis pinnata, California holly grape
 Berberis thunbergii, Japanese barberry
 Calycanthus occidentalis, western spice bush
 Carpenteria californica, bush anemone
 Ceanothus spp., ceanothus
 Cephalanthus occidentalis, buttonbush
 Cercocarpus betuloides, mountain mahogany
 Cistus species and cultivars, rockrose
 Cornus sericea & varieties, redbud dogwood
 Corylus cornuta californica, western hazelnut
 Frangula californica, coffeeberry
 Garrya elliptica, coast silktassel
 Gaultheria shallon, salal
 Heteromeles arbutifolia, toyon
 Holodiscus discolor, oceanspray, cream bush
 Lupinus albifrons, silver bush lupine
 Malva assurgentiflora, tree mallow
 Philadelphus lewisii, native mock orange
 Physocarpus capitatus, Pacific ninebark
 Pittosporum tobira, mock orange
 Prunus emarginata, bitter cherry
 Prunus ilicifolia, holly leaf cherry
 Prunus virginiana var. demissa, western chokeberry
 Rhamnus crocea, redberry buckthorn
 Ribes aureum, golden currant
 Ribes menziessi, canyon gooseberry
 Ribes sanguineum glutinosum, red-flowering currant
 Ribes speciosum, fuchsia-flowering gooseberry
 Rosa californica, California wild rose

Rosa gymnocarpa, wood rose
 Rubus ursinus, California blackberry
 Salvia clevelandii, Cleveland sage
 Salvia leucophylla, purple sage
 Sambucus nigra cerulean, blue elderberry
 Santolina species and cultivars, santolina
 Symphoricarpos albus, common snowberry
 Vaccinium ovatum, California huckleberry

Perennials

Achillea millefolium, yarrow
Acmispon glaber, common deerweed
Aquilegia Formosa, western columbine
Armeria maritime, sea thrift
Artemisia douglasiana, mugwort
Asarum caudatum, wild ginger
Asclepias fascicularis, narrowleaf milkweed
Asclepias speciose, showy milkweed
Aster radulinus, rough-leaved aster
Atriplex californica, California saltbush
Cerastium arvense, field chickweed
Chamaemelum nobile, chamomile
Clinopodium douglasii, yerba buena
Delphinium californicum, California larkspur
Dicentra Formosa, Pacific bleeding heart
Dietes spp., fortnight lily
Epilobium canum, California fuchsia
Equisetum hyemale, scouring rush
Erigeron foliosus var. *franciscensis*, San Francisco leafy fleabane
Erigeron glaucus§, seaside daisy
Eriogonum fasciculatum, California buckwheat
Eriogonum giganteum, St. Catherine's lace
Eriogonum latifolium, coast buckwheat
Eriogonum parvifolium, dune buckwheat
Eschscholzia californica, California poppy
Euthamia occidentalis, western goldenrod
Fragaria chiloensis, coast strawberry
Fragaria vesca, woodland strawberry
Frankenia salina, yerba reuma; sea heath
Grindelia hirsutula, gumweed
Heuchera micrantha, crevice alumroot
Hosackia gracilis, harlequin lotus
Iris douglasiana, Douglas iris; Pacific iris
Lavandula spp. & cvs., lavender
Limonium californicum, marsh rosemary
Lupinus bicolor, miniature lupine
Mimulus aurantiacus, sticky monkeyflower
Mimulus cardinalis, scarlet monkeyflower
Mimulus guttatus, creek monkeyflower
Monardella villosa, coyote mint
Monardella villosa franciscana, San Francisco coyote mint

Nepeta spp., catmint
Oxalis oregana, redwood sorrel
Penstemon spp., penstemon
Phacelia californica, California phacelia
Plantago subnuda, tall coastal plantain
Prosartes hookeri, Hooker's fairy bells
Prunella vulgaris, self-heal
Salvia spathacea, hummingbird sage
Scrophularia californica, bee plant; California figwort
Senecio hydrophilus, alkali marsh ragwort
Sidalcea malviflora, checkerbloom
Sisyrinchium bellum, blue-eyed grass
Sisyrinchium californicum, yellow-eyed grass
Solanum umbelliferum, nightshade
Solidago spathulata, coast goldenrod
Solidago velutina californica, California goldenrod
Stachys byzantine, lambs ears
Thymus pseudolanuginosus, wooly thyme
Typha latifolia, common cattail

Grasses and Grass-like plants

Acorus gramineus, sweet flag
 Agrostis exarata, bentgrass
 Agrostis hallii, Hall's bentgrass
 Agrostis pallens, bentgrass
 Alopecurus saccatus, Pacific foxtail
 Bouteloua gracilis, blue grama
 Bromus carinatus, California brome
 Calamagrostis nutkaensis, Pacific reedgrass
 Carex barbarae, Santa Barbara sedge
 Carex densa, dense sedge
 Carex obnupta, slough sedge
 Carex pansa, Pacific dune sedge
 Carex praegracilis, clustered field sedge
 Carex tumulicola, foothill sedge
 Chondropetalum tectorum, cape rush
 Deschampsia cespitosa, tufted hairgrass
 Distichlis spicata, salt grass
 Eleocharis macrostachya, pale spikerush
 Eleocharis palustris, creeping spikerush
 Elymus glaucus, blue wild rye
 Elymus trachycaulus, slender wheatgrass
 Elymus triticoides, creeping wild rye
 Festuca californica, California fescue
 Festuca idahoensis, Idaho fescue
 Festuca rubra, red fescue
 Hordeum brachyantherum, meadow barley
 Juncus patens, spreading rush
 Juncus xiphiodes, irisleaf rush
 Koeleria macrantha, prairie junegrass
 Melica californica, California melic
 Melica imperfect, coast range melic
 Miscanthus sinensis, Japanese silver grass
 Muhlenbergia rigens, deer grass
 Panicum virgatum, switchgrass
 Pleuropogon californicus, semaphore grass
 Poa unilateralis, San Francisco bluegrass
 Schoenoplectus acutus, tule
 Schoenoplectus americanus, three square
 Schoenoplectus californicus, bulrush
 Schoenoplectus maritimus, prairie bulrush
 Stipa lepida, foothill needlegrass
 Stipa pulchra, purple needlegrass



Fragaria chiloensis (Coastal Strawberry). Photo: Barbara Eisenstein

Ferns

Adiantum jordanii, California maidenhair fern
Dryopteris expansa, spreading wood fern
Pellaea andromedaefolia, coffee fern
Polypodium scolieri, leather leaf fern
Polystichum munitum, western sword fern
Woodwardia fimbriata, giant chain fern

Vines

Aristolochia californica, pipevine
Calystegia purpurata, morning glory
Clematis lasiantha, pipestems; chaparral clematis
Clematis ligusticifolia, western white clematis
Marah oregano, coastal manroot
Vitis californica 'Roger's Red', California wild grape



Polystichum munitum (Western Sword Fern) and *Fragaria vesca* (Woodland Strawberry). Photo: Becky Lithander



Top: Lavatera assurgentiflora (Tree Mallow), bottom: Eriogonum fasciculatum (California Buckwheat). Photo: Barbara Eisenstein



Eschscholzia californica (California Poppy). Photo: Barbara Eisenstein

References

Alameda Countywide Clean Water Program, “Appendix B: Plant List and Planting Guidance”, *C.3 Stormwater Technical Guidance*, August 2006

Bay-Friendly Coalition, *Bay-Friendly Landscape Guidelines: Sustainable Practices for the Landscape Professional*, <<http://www.bayfriendlycoalition.org/bfguidedetail.shtml>>, April 2013.

Bay Conservation and Development Commission, *Shoreline Plants Landscape Guide*, <<http://www.bcdc.ca.gov/pdf/planning/SPLG.pdf>>, 2007

Bornstein, Carol, David Fross and Bart O’Brien, *California Native Plants for the Garden*, Los Olivos, CA, Cachuma Press, 2005.

Calflora, accessed March 10, 2015, <www.calflora.org>.

California Invasive Plant Council, accessed March 10, 2015, <www.cal-ipc.org>.

Central Coast Low Impact Development Initiative, “LID Plant Guidance for Bioretention”, <http://www.centralcoastlidi.org/uploads/LIDPlantGuidanceTAM_2014.11.17_letter.pdf> .

East Bay Municipal Utility District, *Plants and Landscapes for Summer Dry Climates of the San Francisco Bay Region*, <www.ebmud.com>, May 2004.

Hinman, Curtis, *Low Impact Development Technical Guidance Manual for Puget Sound*, <http://www.psp.wa.gov/LID_manual.php>, December 2012

Perry, Robert C., *Landscape Plants for California Gardens*, Land Design Publishing, 2010

Portland, City of, “Appendix F.4: Planting Template and Plant Lists”, *2014 Stormwater Management Manual*, <<https://www.portlandoregon.gov/bes/64040>>, January 2014.

San Francisco Public Works and Urban Forestry Council, *Recommended Street Trees*, <<http://sfdpw.org/index.aspx?page=1420>>.

San Francisco Public Works, *Recommended Drought Tolerant Plants for Sidewalk Landscaping*, <<http://sfdpw.org/index.aspx?page=1420>>.

San Francisco Public Works, *San Francisco Climate Zone Map*, <<http://sfdpw.org/index.aspx?page=1420>>.

San Francisco Plant Finder, <www.sfplantfinder.org>

San Francisco Planning Department. “Green Connections”, accessed March 10, 2015, <<http://greenconnections.sfplanning.org>>.

Salinas, City of, “Appendix G: LID Planting Zones and Plant List”, *Stormwater Development Standards*, 2008.

Santa Clara Valley Urban Runoff Pollution Prevention Program, “Appendix D: Plant List and Planting Guidance for Landscape-Based Stormwater Measures”, *C.3 Stormwater Handbook*, April 2012

Santa Rosa, City of, “LID Plant and Tree List”, accessed March 10, 2015, <http://srcity.org/doclib/Documents/DraftPlantList4LID_Manual.pdf>

Seattle, City of, “Green Factor Plant List”, accessed March 10, 2015, <<http://www.seattle.gov/dpd/cityplanning/completenesslist/greenfactor/documents/>>

WUCOLS IV, last modified January 2, 2014. <<http://ucanr.edu/sites/WUCOLS/>>