

**RESOLUTION CREATING THE CITY OF LAS VEGAS
URBAN FORESTRY PROGRAM**

WHEREAS, the urban forest within the City of Las Vegas and Southern Nevada region provides numerous and important economic, social, and environmental benefits, including cleaner air, mitigation of the urban heat island effect, improvement of storm water quality, energy conservation, enhanced public health, and increased property values; and

WHEREAS, Southern Nevada's urban forests are necessary to reduce increased temperatures resulting from the urban heat island, and appropriate drought tolerant, Mojave Desert native and adaptive tree and plant species are essential for the tolerance of heat and water conservation; and

WHEREAS, on May 7, 2008, the City Council adopted an urban forestry resolution (R-26-2008), resolving to increase tree canopy coverage, develop partnerships for urban forestry, and prepare an urban forestry management plan; and

WHEREAS, the City of Las Vegas 2050 Master Plan (Ordinance 6788, adopted by the City Council on July 21, 2021) includes an Urban Forestry goal, which establishes short and long term outcomes to plant and maintain 60,000 trees by 2050, increase the City's tree canopy to 25% by 2050, and ensure 85% of the City's population lives within a 1/3 mile from green infrastructure; and

WHEREAS, the 2050 Master Plan recognizes and supports proper tree care, placement, maintenance, and management; the important role of trees within the urban environment; and that the remediation or removal of sick, dying, nuisance or invasive tree and plant species may be necessary to reduce risks to public health, safety or damage to public or private property; and

WHEREAS, the City has received recognition as a "Tree City USA" from the Arbor Day Foundation for the past 30 years, and an urban forestry initiative will allow the City to maintain this designation; and

WHEREAS, the Mayor's Fund for Las Vegas LIFE accepts donations to address the community's challenges, including "Going Green for Good Health," that aligns with the 2050 Master Plan's goals; and

WHEREAS, the City has partnered with non-profit organizations on tree planting efforts, including ImpactNV and Get Outdoors Nevada, and has received grants and donations to the Mayor's Fund for Las

1 Vegas LIFE for tree planting activities; and

2 WHEREAS, the City Council finds it desirable to continue developing partnerships with public
3 institutions, academic institutions, regulatory agencies and regional bodies to broaden the possibilities for
4 conducting research and analyzing the benefits of the urban forest in this part of the country; and

5 WHEREAS, a proper urban forestry management plan will guide the care and preservation of public
6 trees, outline the budgetary and staffing needs for the management and planting of trees on public property
7 and provide outreach to private property in order to fulfill the goals of the 2050 Master Plan; and

8 WHEREAS, a formal urban forestry program will enhance community awareness through education
9 and outreach, protection and care of current and future trees, and foster pride and ensure the City's long-
10 term sustainability, resilience, health, and livability.

11 NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LAS
12 VEGAS AS FOLLOWS:

13 1. The City of Las Vegas Urban Forestry Program is hereby created and incorporates by reference the
14 relevant identified urban forestry, water, and hazard goals, outcomes, and implementation strategies of the
15 City of Las Vegas 2050 Master Plan. The program shall include:

16 A. Maintenance of the City's Tree City USA designation, including at least one public tree
17 planting event.

18 B. A program of public education to provide information, public awareness, and encourage
19 public participation in planting, maintaining and caring for trees and the tree canopy.

20 C. Coordination with state and regional academic institutions, public agencies, and the private
21 sector on relevant urban forestry matters.

22 D. The formation and maintenance of partnerships to ensure urban forestry remains a priority
23 for the City and the Southern Nevada region.

24 E. A process to designate as "legacy trees" any trees deemed to important, historic, or a
25 landmark.

26 2. The Urban Forester, in consultation with the Departments of Parks, Recreation, and Cultural Affairs;

1 Community Development; and Public Works, shall prepare and maintain:

2 A. An inventory of all trees on City property and in public rights-of-way, and a plan to ensure
3 that the species of trees are diverse for protection from catastrophic loss due to pests or disease.

4 B. An Urban Forestry Management Plan in alignment with relevant 2050 Master Plan
5 outcomes, including any necessary policy recommendations and budgetary needs for City Council for urban
6 forestry.

7 3. For purposes of the City's Urban Forestry Program, the Southern Nevada Water Authority/Southern
8 Nevada Regional Planning Coalition's Regional Plant List (Exhibit A) is adopted as minimum standards for
9 tree and plant species as follows:

10 A. For use by the City itself in the planting of trees.

11 B. As may be mandated for use by others by means of ordinance or other regulatory document.

12 C. For recommended use by others in the planting of trees within the City limits.

13 4. For purposes of the City's Urban Forestry Program, the City's Urban Forester has the discretion to
14 do the following with respect to the use of the "CLV Preferred Tree List" (Exhibit B):

15 A. Designate the list as the "City of Las Vegas Approved Tree and Plant Species List."

16 B. Mandate its use as the minimum standard for the planting of trees by the City or its authorized
17 agents or contractors.

18 C. Recommend its use as the minimum standard for the planting of other trees within the City
19 limits.

20 D. Further update, modify, or amend the list from time to time to add to, remove, diversify, or
21 restrict specific plant or tree species.

22 ...

23 ...

24 ...

25 ...

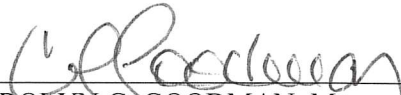
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1 5. The Urban Forester, or other designated staff in coordination with the Code Enforcement Division
2 of the Department of Community Development, may recommend mitigation measures or the removal of any
3 tree or plant on public or private property that may pose a threat to public health, safety, or welfare by reason
4 of damage, nuisance, disease, or pest.

5 PASSED, ADOPTED, AND APPROVED this 7th day of September, 2022.

6 CITY OF LAS VEGAS

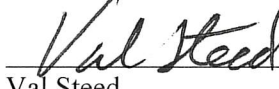
7
8 BY


CAROLYN G. GOODMAN, Mayor

9 ATTEST:

10 
11 LUANN D. HOLMES, MMC
City Clerk

12 APPROVED AS TO FORM

13  8-22-22
14 Val Steed, Date
Deputy City Attorney

KEY																												
Rating: Based on a combination of factors related to climate resiliency such as environmental tolerances (heat, cold), water efficiency, drought tolerance, pathogen resistance, along with some additional factors like diversity, maintenance needs, and invasiveness. Plants rated from 0★ (least appropriate) to 4★ (most appropriate)											Comments:																	
Tree Size (based on both height and width): Small (< 20 ft), Medium (20-29 ft), Large (30- 45ft), EXtra Large (>45ft)																												
Tree Type: Deciduous, Evergreen, Semi-evergreen																												
Growth Rate: Slow, Moderate, Fast																												
Water Needs: Very Low, Low, Moderate, High																												
Excessive Litter: Leaves, Flowers, Seeds/Fruit																												
Biogenic Volatile Organic Compounds: Low, Medium, High, or data not available ----											3. Potential diversity issues 4. Low environmental tolerances 5. Invasive species 6. Mojave native 7. Low drought tolerance 8. High pathogen susceptibility 9. Reduced longevity 10. Protected North or East facing microclimate necessary																	
Botanical Name	Cultivar	Common Name	Rating	Tree Size	Height (average)	Width (average)	Coverage	Tree Type	Growth Rate	Water Needs	Excessive Litter	Spines or Thorns	Biogenic Volatile Organic Compounds (BVOC's)	Parking Lot Tree	Yes or No	Street Tree	Yes or No	Buffer Tree	Yes or No	Minimum Soil Surface Area (sq. feet)	Minimum Soil Volume (cu. feet)	Tolerates Compacted Soil	Yes or No	Compatible with Turf Grass	Yes or No	Compatible with Overhead Utilities	Comments	
TREES																												
Acacia aneura		Mulga Acacia	4★	M	20	15	133	E	S	V	----	N	M	Y	Y	Y	120	200	N	N	Y							
Acacia baileyana	'Purpurea'	Cootamundra Wattle	1★	M	20	15	133	Not Recommended																			4,9,10	
Acacia coriacea		Desert Oak, Wiry Wattle	3★	M	20	20	236	E	M	L	L	N	L	Y	Y	Y	120	500	Y	N	Y							
Acacia estrophiolata		Ironwood	3★	M	25	25	368	E	M	V	----	N	----	Y	Y	Y	120	500	Y	N	N							
Acacia jennerae		Coonawarra Wattle	3★	M	20	15	133	E	S	L	----	N	----	Y	Y	Y	120	200	N	N	N							
Acacia pendula		Weeping Acacia	4★	M	25	20	236	E	M	V	S	N	M	Y	Y	Y	120	350	Y	N	N							
Acacia salicina		Willow Acacia	3★	L	30	20	236	E	F	L	L	N	----	Y	Y	Y	200	350	Y	N	N							
Acacia cupularis (=saligna)		Blue Leaf Wattle	2★	M	25	20	236	E	F	L	L	N	----	Y	Y	Y	120	350	Y	N	N							5
Acacia stenophylla		Shoestring Acacia	2★	L	40	20	236	E	M	F	L	L	S	N	L	Y	Y	Y	200	350	Y	N	N					3,5
Acer tataricum ssp. ginnala		Amur Maple	2★	S	15	15	133	D	S	H	L	N	----	N	N	N	N	80	200	N	Y	Y						1,7
Acer negundo		Box Elder	1★	L	30	30	530	Not Recommended																			1,2,6,7,9	
Acer palmatum var. atropurpureum		Dwarf Japanese Maple	0★	S	12	12	85	Not Recommended																			1,2,4,7,10	
Afrocarpus falcatus		African Fern Pine	1★	M	25	15	133	Not Recommended																			1,4,10	
Ailanthus altissima		Tree of Heaven	0★	L	35	35	722	Not Recommended																			4,5,7,8,9	
Albizia lebbekoides (=julibrissin)		Mimosa, Silk Tree	0★	L	25	30	530	Not Recommended																			5,8,9,10	
Arbutus unedo		Strawberry Tree	2★	S	15	15	133	E	S	M	S	N	L	N	N	N	80	200	N	N	Y							4,7,10
Arbutus x andrachnoides	'Marina'	Marina Strawberry Tree	2★	M	25	25	368	E	S	M	S	N	L	N	N	N	120	500	N	Y	Y							1,4,7,10
Bauhinia lunarioides		Anacacho Orchid Tree	4★	S	12	12	85	D	M	L	----	N	----	N	N	N	80	200	N	N	Y							1
Bauhinia macranthera		Chihuahuan Orchid Tree	3★	S	12	15	133	D	M	L	----	N	----	N	N	N	80	200	N	N	Y							1
Bauhinia purpurea		Purple Orchid Tree, Butterfly Tree	1★	M	25	25	368	Not Recommended																			1,4,9,10	
Bouhinia x blakeana		Hong Kong Orchid Tree	1★	M	25	20	236	Not Recommended																			1,4,9,10	
Brachychiton acerifolius		Illawarra Flame Tree	1★	L	30	20	236	Not Recommended																			1,4,7,9	
Brachychiton populneus		Bottle Tree	1★	L	30	20	236	Not Recommended																			1,4,7,9	
Callistemon viminalis		Weeping Bottlebrush	2★	S	18	15	133	E	M	M	----	N	H	N	N	N	80	200	N	Y	Y							1
Calocedrus decurrens		Incense Cedar	1★	L	30	10	59	Not Recommended																			4,7	
Casuarina cunninghamiana		River She Oak	3★	L	30	20	236	E	F	M	L	N	----	N	N	Y	Y	200	400	N	N	N						
Casuarina equisetifolia		Australian Pine	3★	L	30	20	236	E	F	M	L	N	----	N	N	Y	Y	200	400	N	N	N						
Cedrus atlantica	'Glaucua'	Blue Atlas Cedar	2★	L	40	20	236	E	M	M	----	N	L	N	N	Y	Y	200	300	N	Y	N						1
Cedrus deodora		Deodar Cedar	1★	X	60	30	530	Not Recommended																			1,4,7,9	
Celtis australis		Mediterranean Hackberry	3★	L	45	35	722	D	M	M	L	N	----	N	Y	N	Y	200	1300	N	Y	N						1
Celtis occidentalis		Common Hackberry	3★	L	45	30	530	D	F	M	L	N	----	N	Y	N	Y	200	1000	N	N	N						1
Celtis laevigata var. reticulata		Nettleleaf/Western Hackberry	4★	M	20	20	236	D	S	L	M	S	N	L	N	Y	N	120	300	N	N	Y						6
Celtis sinensis		Chinese Hackberry	1★	L	30	30	530	Not Recommended																			1,4,9,10	
Ceratonia siliqua		Carob	3★	L	35	20	236	E	M	L	M	S	N	M	N	Y	Y	Y	200	400	N	Y	N					4
Cercis canadensis		Eastern Redbud	1★	M	20	15	133	Not Recommended																			1,2,4,10	
Cercis canadensis var. mexicana		Mexican Redbud	3★	M	20	15	133	D	S	M	----	N	L	N	N	N	120	500	N	Y	Y							1
Cercis canadensis var. texensis	'Oklahoma'	Texas/Oklahoma Redbud	3★	M	20	20	236	D	S	M	----	N	L	N	N	N	120	300	N	Y	Y							1
Cercis chinensis	'Avondale'	Avondale Chinese Redbud	1★	S	12	10	59	Not Recommended																			1,4,10	
Cercis occidentalis		Western Redbud	2★	S	15	15	133	D	S	M	L	M	----	N	L	N	N	80	200	N	Y	Y						6
Chilopsis linearis		Desert Willow	3★	M	25	20	236	D	M	M	L	F	S	N	M	N	Y	N	120	300	Y	N	N					2,3,6
Chionanthus retusus		Chinese Fringe Tree	2★	S	15	15	133	D	S	M	----	N	----	N	N	N	80	200	N	Y	Y							1
x Chitalpa tashkentensis		Chitalpa	0★	M	20	20	236	Not Recommended																			1,4,7,8,9	
Cinnamomum camphora		Camphor Tree	0★	L	40	30	530	Not Recommended																			1,4,7	
Citrus spp.		Citrus Tree	2★	S	15	15	133	E	M	M	H	S	N	----	N	N	N	80	200	N	N	Y						4,7,10
Condalia hookeri		Brazilian Bluewood	3★	S	15	15	133	D	M	V	----	Y	----	N	N	N	80	200	N	N	Y							
Cordia boissieri		Texas Olive	4★	M	20	15	133	S	S	M	M	----	N	----	N	N	Y	120	200	N	Y	Y						
Corymbia papuana (=Eucalyptus)		Ghost Gum	2★	X	50	30	530	E	M	L	S	N	H	N	Y	Y	Y	240	1300	N	N	N						4
Cotinus coggygria		Smoke Tree	2★	S	15	15	133	D	S	L	M	----	N	M	N	N	80	100	N	Y	Y							1,4,10
Cupaniopsis anacardioides		Carrotwood	0★	L	30	25	368	Not Recommended																			4,5,9	
Cupressus arizonica var. glabra		Arizona Cypress	2★	X	50	15	133	E	M	L	M	----	N	L	N	N	Y	200	600	N	Y	N						1,2,9
Cupressus sempervirens		Italian Cypress	1★	L	40	5	15	Not Recommended																			1,4	
Cupressus x leylandii		Leyland Cypress	0★	L	40	15	236	Not Recommended																			1,2,4,8,9	
Dalbergia sissoo		Indian Rosewood	3★	L	45	35	722	E	M	L	----	N	----	Y	Y	Y	Y	200	1300	Y	N	N						4
Ebenopsis ebano (=Pithecellobium)		Texas Ebony	3★	M	25	20	236	S	S	M	V	----	Y	----	N	Y	Y	Y	120	300	Y	N	N					8
Elaeagnus angustifolia		Russian Olive	0★	L	20	20	236	Not Recommended																			5,7,8	
Elaeocarpus sylvestris (=decipiens)		Japanese Blueberry	1★	L	25	25	368	Not Recommended																			1,4,7,10	
Enobotrya deflexa		Bronze Loquat	0★	S	15	15	133	Not Recommended																			1,4,7,8,9,10	
Eriobotrya japonica		Loquat	0★	S	15	15	133	Not Recommended																			1,4,7,8,9,10	
Eucalyptus camaldulensis		Red River Gum	3★	X	55	40	942	E	M	M	----	N	H	N	N	Y	Y	240	1600	N	Y	N						5
Eucalyptus gunnii		Cider Gum	2★	L	45	25	368	E	M	M	L	N	H	Y	Y	Y	Y	200	700	Y	N	N						5
Eucalyptus microtheca		Coolibah	3★	L	40	25	368	E	M	L	M	L	N	H	Y	Y	Y	200	700	Y	N	N						5
Eucalyptus nicholii		Willow Leaf Peppermint Gum	2★	L	35	25	368	E	F	M	----	N	H	N	Y	Y	Y	200	700	N	N	N						1,5
Eucalyptus polyanthemus		Silver Dollar Gum	2★	L	40	30	530	E	F	L	M	L	N	H	N	Y	Y	200	1000	N	N	N						1
Eucalyptus rudis		Desert/Flooded Gum	3★	L	45	30	530	E	M	M	----	N	H	N	Y	Y	Y	240	1000	N	N	N						
Eucalyptus sideroxylon		Red Ironbark	3★	L	40	25	368	E	M	M	----	N	H	N	N	Y	Y	200	1000	N	Y	N						
Eucalyptus spathulata		Narrow-leaf Gimlet	3★	M	25	20	236	E	M	L	----	N	----	N	N	Y	Y	120	350	N	N	Y						
Eysenhardtia orthocarpa		Kidneywood	3★	M	20	20	236	S	M	L	----	N	----	N	Y	Y	Y	120	350	N	N	Y						1
TREES (continued)																												
Fraxinus angustifolia		Narrow-leaved Ash	1★	L	35	25	368	Not Recommended																			1,7,8,9	

KEY																							
Rating: Based on a combination of factors related to climate resiliency such as environmental tolerances (heat, cold), water efficiency, drought tolerance, pathogen resistance, along with some additional factors like diversity, maintenance needs, and invasiveness. Plants rated from 0★ (least appropriate) to 4★ (most appropriate) Tree Size (based on both height and width): Small (< 20 ft), Medium (20-29 ft), Large (30- 45ft), Extra Large (>45ft) Tree Type: Deciduous, Evergreen, Semi-evergreen Growth Rate: Slow, Moderate, Fast Water Needs: Very Low, Low, Moderate, High Excessive Litter: Leaves, Flowers, Seeds/Fruit Biogenic Volatile Organic Compounds: Low, Medium, High, or data not available ---			Comments: 1. Organic mulch recommended 2. Many cultivars 3. Potential diversity issues 4. Low environmental tolerances 5. Invasive species 6. Mojave native 7. Low drought tolerance 8. High pathogen susceptibility 9. Reduced longevity 10. Protected North or East facing microclimate necessary																				
Botanical Name	Cultivar	Common Name	Rating	Tree Size S, M, L, X	Height (average) (feet)	Width (average) (feet)	Coverage (sq. feet)	Tree Type D, E, S	Growth Rate S, M, F	Water Needs V, L, M, H	Excessive Litter L, F, S	Yes or No Spines or Thorns	Biogenic Volatile Organic Compounds (BVOC's) L, M, H	Yes or No Parking Lot Tree	Yes or No Street Tree	Yes or No Buffer Tree	Minimum Soil Surface Area (sq. feet)	Minimum Soil Volume (cu. feet)	Tolerates Compacted Soil Yes or No	Compatible with Turf Grass Yes or No	Compatible with Overhead Utilities Yes or No	Comments	
<i>Fraxinus angustifolia ssp. oxycarpa</i>	'Raywood'	Raywood Ash	0★	L	30	236							Not Recommended									1,3,4,7,8	
<i>Fraxinus anomala</i>		Single-leaf Ash	3★	M	20	236		D	M	M	---	N	---	N	N	N	120	500	N	Y	Y	1,6	
<i>Fraxinus uhdei</i>		Shamel Ash	0★	L	40	30	530						Not Recommended									1,4,7,8,9	
<i>Fraxinus velutina</i>		Velvet/Arizona Ash	1★	L	40	30	530						Not Recommended									1,2,4,7,8	
<i>Fraxinus velutina</i>	'Bonita'	Bonita/Montebello Ash	1★	L	30	30	530						Not Recommended									1,2,6,7	
<i>Fraxinus velutina</i>	'Modesto'	Modesto Ash	1★	L	40	25	368						Not Recommended									1,4,7,8	
<i>Fraxinus x velutina</i>	'Fan-West', 'Fan-Tex'	Fan-West/Fan-Tex Ash	1★	L	40	30	530						Not Recommended									1,2,3,4,7,8	
<i>Geijera parviflora</i>		Australian Willow	1★	M	25	20	236						Not Recommended									4,9	
<i>Geoffroea decorticans</i>		Chilean Palo Verde	3★	M	25	25	368	D	S	V	S	Y	---	Y	Y	Y	120	500	N	N	N	4	
<i>Ginkgo biloba</i>		Maidenhair Tree	2★	L	30	20	236	D	S	M	---	N	M	N	N	N	200	600	N	N	N	1,4,7	
<i>Gleditsia triacanthos var. inermis</i>		Thornless Honey Locust	3★	L	35	30	530	D	M	M	S	N	M	N	Y	N	200	1000	N	Y	N	1,2	
<i>Grevillea robusta</i>		Silk Oak	1★	L	35	20	236						Not Recommended									4	
<i>Havardia mexicana</i>		Mexican Ebony	4★	L	30	25	368	D	M	L	---	Y	---	Y	Y	N	200	600	N	N	N		
<i>Havardia pallens</i> (=Pithecellobium)		Tenaza	3★	M	20	15	133	D	M	L	---	N	---	N	N	N	120	100	N	N	Y		
<i>Ilex x altacelerensis</i>	'Wilsonii'	Wilson Holly	1★	S	15	10	59						Not Recommended									1,4,7,10	
<i>Ilex cornuta</i>	'Burfordii'	Burford Holly	1★	S	15	12	85						Not Recommended									1,2,4,7,10	
<i>Ilex x 'Nellie R. Stevens'</i>	'Nellie R. Stevens'	Nellie R. Stevens Holly	1★	S	18	10	59						Not Recommended									1,4,7,10	
<i>Ilex vomitoria</i>		Yaupon Holly	1★	S	15	10	59						Not Recommended									1,2,4,7,10	
<i>Jacaranda mimosifolia</i>		Jacaranda	0★	L	35	25	368						Not Recommended									1,4,9	
<i>Juniperus monosperma</i>		One-seed Juniper	3★	S	15	15	133	E	S	L	---	N	---	N	N	Y	80	200	N	N	Y	1,6	
<i>Juniperus osteosperma</i>		Utah Juniper	3★	M	20	20	236	E	S	L	---	N	---	N	N	Y	120	300	N	N	Y	1,6	
<i>Juniperus scopulorum</i>		Rocky Mountain Juniper	3★	L	30	15	133	E	M	M	---	N	---	N	N	Y	200	300	N	N	N	1,2,6	
<i>Koeleruteria bipinnata</i>		Chinese Flame Tree	1★	L	30	30	530						Not Recommended									1,4,7,9	
<i>Koeleruteria paniculata</i>		Goldenrain Tree	2★	L	30	30	530	D	M	M	---	N	H	N	Y	N	200	1000	N	Y	N	1,7	
<i>Lagerstroemia indica</i>		Crape Myrtle	1★	S	15	12	85						Not Recommended									1,2,4,7,10	
<i>Laurus nobilis</i>		Bay Laurel	3★	M	20	15	133	E	M	M	---	N	L	N	N	Y	80	200	N	Y	Y	1	
<i>Leucaena leucocephala</i>		White Lead Tree	0★	M	25	25	368						Not Recommended									4,5,9	
<i>Leucaena retusa</i>		Golden Leadball Tree	4★	M	20	20	236	D	M	L	M	---	N	M	N	Y	Y	120	300	N	N	Y	
<i>Ligustrum lucidum</i>		Glossy Privet	0★	M	25	20	236						Not Recommended									4,7,9,10	
<i>Lysiloma watsonii</i>		Fern of the Desert	2★	S	15	15	133	S	M	L	S	N	---	N	N	N	80	200	N	N	Y	4	
<i>Maclura pomifera</i>	'White Shield'	Osage Orange	2★	L	30	30	530	D	M	M	---	Y	---	N	N	Y	120	300	1000	N	Y	1,7	
<i>Magnolia grandiflora</i>	'Little Gem'	Southern Little Gem Magnolia	0★	M	25	12	85						Not Recommended									4,7,9,10	
<i>Melia azedarach</i>		Chinaberry	1★	L	30	30	530						Not Recommended									1,5,9	
<i>Morus alba</i> (Female)	'Unryu'	Fruiting/Contorted Mulberry	2★	M	25	20	236	D	M	M	L,F,S	N	---	N	N	Y	120	350	N	Y	N	1,5,7	
<i>Olea europaea</i>	'Swan Hill', 'Wilsonii'	Fruitless Olive	2★	M	25	20	236	E	S,M	M	---	N	L	Y	Y	Y	120	300	N	Y	N	1,4	
<i>Olneya tesota</i>		Desert Ironwood	3★	M	25	25	368	D	S	V	---	Y	M	Y	Y	Y	120	500	Y	N	N	4	
<i>Parkinsonia aculeata</i>		Mexican Palo Verde	0★	M	20	20	236						Not Recommended									5,8,9	
<i>Parkinsonia florida</i>		Blue Palo Verde	3★	L	30	30	530	D	M	V,L	S	Y	M	Y	Y	Y	200	1000	Y	N	N	5	
<i>Parkinsonia microphylla</i>		Foothill Palo Verde	4★	M	20	20	236	D	S,M	V	---	Y	M	N	Y	Y	120	300	N	N	Y		
<i>Parkinsonia praecox</i>		Palo Brea	4★	L	25	30	530	D	M	V	S	Y	---	N	N	Y	Y	200	1000	Y	N	N	
<i>Parkinsonia x 'AZT Thornless'</i>	'AZT Thornless'	Thornless Hybrid Palo Verde	4★	M	25	25	368	S	M	V,L	---	N	M	Y	Y	Y	120	500	Y	N	N		
<i>Parkinsonia x 'Desert Museum'</i>	'Desert Museum'	Desert Museum Palo Verde	2★	M	25	25	368	S	M	V,L	---	N	M	Y	Y	Y	120	500	Y	N	N	3	
<i>Parkinsonia x 'Sonoran Emerald'</i>	'Sonoran Emerald'	Sonoran Emerald Palo Verde	3★	M	25	25	368	S	M	V,L	---	N	M	Y	Y	Y	120	500	Y	N	N	8	
<i>Parkinsonia x sonorae</i>		Sonoran Palo Verde	4★	M	20	20	236	D	S	V	---	Y	M	N	Y	Y	120	300	N	N	Y		
<i>Paulownia kawakamii</i> (=tomentosa)		Sapphire Dragon Tree	0★	S	15	15	133						Not Recommended									4,5,7,9,10	
<i>Pinus brutia</i>		Turkish/Calabrian Pine	2★	X	50	30	530	E	F	M	L	N	---	N	N	Y	240	1000	N	Y	N	1	
<i>Pinus brutia var. eldarica</i>		Afghan/Mondell Pine	1★	X	45	30	530						Not Recommended									1,3,4,8	
<i>Pinus canariensis</i>		Canary Island Pine	1★	X	45	25	368						Not Recommended									1,4	
<i>Pinus halepensis</i>		Aleppo Pine	1★	X	45	25	368						Not Recommended									1,3,4,8	
<i>Pinus pinea</i>		Stone Pine	2★	X	60	40	942	E	S,M	M	L	N	M	N	Y	Y	240	1600	N	Y	N	1,8	
<i>Pinus roxburghii</i>		Chir Pine	2★	L	40	25	368	E	M	M	L	N	M	N	Y	Y	200	700	N	Y	N	1	
<i>Pinus sabiniana</i>		Foothill/Gray Pine	3★	X	55	30	530	E	M	M	L,S	N	L	N	Y	Y	240	1300	N	Y	N	1	
<i>Pinus thunbergii</i>		Japanese Black Pine	0★	S	15	15	133						Not Recommended									1,4,8,9,10	
<i>Pistacia atlantica</i>		Mt. Atlas Mastic Tree	2★	L	30	30	530	S	M	M	S	N	---	N	N	N	200	1000	N	N	N	1	
<i>Pistacia chinensis</i>		Chinese Pistache	3★	L	35	30	530	D	M	M	L,S	N	M	Y	Y	N	200	1000	Y	N	N	1,2,3	
<i>Pistacia lentiscus</i>		Mastic Tree	3★	M	15	20	236	E	S	L	L	N	---	N	Y	Y	120	350	N	N	Y	4	
<i>Pistacia x 'Red Push'</i>	'Red Push'	Red Push Pistache	3★	L	30	30	530	D	M	M	L,S	N	M	Y	Y	N	200	1000	Y	N	N	1,3	
<i>Pittosporum phylliraeoides</i>		Willow Pittosporum	4★	M	20	15	133	E	M	L	L,F	N	---	Y	Y	Y	120	200	N	N	Y	4	
<i>Platanus acerifolia</i>		London Plane Tree, Sycamore	1★	X	60	40	942						Not Recommended									1,2,4,7,8	
<i>Platanus mexicana</i>		Mexican Sycamore	2★	X	50	35	722	D	F	M	L	N	H	N	Y	N	200	1300	N	Y	N	1,7	
<i>Platanus racemosa</i>		California Sycamore	1★	X	50	40	942						Not Recommended									1,4,7,8	
<i>Platanus wrightii</i>		Arizona Sycamore	2★	X	60	40	942	D	F	M,H	L	N	---	N	N	N	240	1600	N	Y	N	1,4,7,8	
<i>Platycladus orientalis</i>		Oriental Arborvitae	1★	M	20	10	59						Not Recommended									1,2	
<i>Podocarpus macrophyllus</i>		Yew Pine	2★	M	25	10	59	E	S,M	L,M	---	N	L	N	N	Y	120	200	N	Y	N	1,7,10	
<i>Populus nigra var. italica</i>		Lombardy Poplar	0★	X	50	15	133						Not Recommended									4,7,8,9	
<i>Populus alba</i>		White Poplar	2★	X	50	40	942	D	F	M	L	N	---	N	N	N	240	1600	N	Y	N	1,2,7,8	
<i>Populus fremontii</i>		Fremont Cottonwood	1★	X	55	30	530						Not Recommended									1,6,7,8	
TREES (continued)																							
<i>Prosopis alba</i>		Argentine Mesquite	2★	L	30	30	530	S	F	L,M	S	Y	---	N	Y	Y	200	1000	Y	N	N	2,3,5	
<i>Prosopis x alba</i>	'Phoenix', 'AZT'	Thornless Hybrid Mesquite	3★	L	30	30	530	S	F	L	S	N	---	Y	Y	Y	200	1000	Y	N	N	2,3	
<i>Prosopis chilensis</i>		Chilean Mesquite	2★	L	30	30	530	S	F	L,M	S	Y	---	N	Y	Y	200	1000	Y	N	N	3,5	

KEY																											
Rating: Based on a combination of factors related to climate resiliency such as environmental tolerances (heat, cold), water efficiency, drought tolerance, pathogen resistance, along with some additional factors like diversity, maintenance needs, and invasiveness. Plants rated from 0★ (least appropriate) to 4★ (most appropriate)			Comments: 1. Organic mulch recommended 2. Many cultivars 3. Potential diversity issues 4. Low environmental tolerances 5. Invasive species 6. Mojave native 7. Low drought tolerance 8. High pathogen susceptibility 9. Reduced longevity 10. Protected North or East facing microclimate necessary																								
Tree Size (based on both height and width): Small (< 20 ft), Medium (20-29 ft), Large (30- 45ft), EXtra Large (>45ft)																											
Tree Type: Deciduous, Evergreen, Semi-evergreen																											
Growth Rate: Slow, Moderate, Fast																											
Water Needs: Very Low, Low, Moderate, High																											
Excessive Litter: Leaves, Flowers, Seeds/Fruit																											
Biogenic Volatile Organic Compounds: Low, Medium, High, or data not available ---																											
Botanical Name	Cultivar	Common Name	Rating	S, M, L, X	Tree Size (feet)	Height (average) (feet)	Width (average) (sq. feet)	Coverage	D, E, S	Tree Type	Growth Rate	V, L, M, H	Water Needs	L, F, S	Yes or No Spines or Thorns	Biogenic Volatile Organic Compounds (BVOC's)	Yes or No Parking Lot Tree	Yes or No Street Tree	Yes or No Buffer Tree	Minimum Soil Surface Area (sq. feet)	Minimum Soil Volume (cu. feet)	Yes or No Tolerates Compacted Soil	Yes or No Compatible with Turf Grass	Yes or No Compatible with Overhead Utilities	Comments		
Prosopis x chilensis	'AZT', 'Arizona'	Thornless Chilean Mesquite	3★	L	30	30	530	S F	L M S	N	---	Y Y	200	1000	Y N N										2,3		
Prosopis x 'Seedless AZT'	'AZT'	Seedless Hybrid Mesquite	3★	L	30	30	530	S F	L	---	Y Y	200	1000	Y N N													
Prosopis glandulosa		Texas Honey Mesquite	3★	L	30	35	722	D F	L S	Y M	N	Y N	200	1300	Y N N										8		
Prosopis glandulosa	'Maverick', 'AZT'	Thornless Honey Mesquite	3★	L	30	30	530	D F	L S	N M	Y Y	N	200	1000	Y N N										8		
Prosopis glandulosa var. torreyana		Western Honey Mesquite	4★	M	20	20	236	D M	V L	Y M	N Y	N	120	350	Y N Y										6,8		
Prosopis pubescens		Screwbean Mesquite	4★	M	20	25	368	D M	V S	Y M	N Y	N	120	500	N N Y										6		
Prosopis velutina		Velvet Mesquite	4★	L	30	30	530	S F	V S	Y L	N Y	Y	200	1000	Y N N										6		
Prunus caroliniana		Carolina Cherry Laurel	0★	M	25	20	236									Not Recommended									1,4,7,8,9,10		
Prunus cerasifera	'Atropurea'	Purple Leaf Plum	0★	S	15	15	133									Not Recommended									1,4,7,8,9,10		
Prunus mexicana		Mexican Plum	2★	M	25	25	368	D M	M S	N	---	N N	N	120	600	N Y N									1		
Punica granatum		Pomegranate	2★	M	20	15	133	D M	M S	Y	---	N N	N	120	200	N N Y									2		
Pyrus calleryana		Ornamental Pear	1★	L	30	20	236									Not Recommended									1,2,4,7,9,10		
Quercus agrifolia		Coast Live Oak	1★	L	30	30	530									Not Recommended									1,4		
Quercus buckleyi		Buckley/Texas Red Oak	2★	L	30	30	530	D S M	L M	L	N	H	N Y	Y	200	1000	N Y N								1,7		
Quercus canbyi		Canby/Sierra Red Oak	3★	L	35	30	530	D M	M	---	N	---	N	Y	N	200	1000	N Y N							1		
Quercus douglasii		Blue Oak	3★	L	30	25	368	D S	M	---	N	---	N	Y	N	200	600	N Y N							1		
Quercus fusiformis		Escarpment Oak	3★	L	30	30	530	E M F	L M S	N	H	N Y	Y	200	1000	N Y N									1		
Quercus gambelii		Gambel Oak	3★	M	25	20	236	D M	M S	N	M	N	N	120	400	N Y N									1,6		
Quercus ilex		Holly Oak	2★	L	30	20	236	E M	M S	N	H	N Y	Y	200	400	N Y N									1		
Quercus lobata		Valley Oak	2★	L	45	40	942	D M	M L S	N	M	N	N	200	1600	N Y N									1,7		
Quercus macrocarpa		Bur Oak	3★	X	55	40	942	D S	M L S	N	---	N Y	N	240	1800	N Y N									1		
Quercus muehlenbergii		Chinquapin/Chinkapin Oak	3★	L	30	30	530	D S M	M L S	N	---	N Y	Y	200	1000	N Y N									1		
Quercus polymorpha		Monterey Oak	3★	L	45	30	530	E M	L M	---	N	---	N Y	Y	200	1000	N Y N								1		
Quercus shumardii		Shumard Oak	2★	L	45	30	530	D M	M L S	N	---	N Y	N	200	1000	N Y N									1,7		
Quercus suber		Cork Oak	3★	L	40	30	530	S S M	M S	N	H	N Y	Y	200	1000	N Y N									1		
Quercus texana		Nuttall Oak	2★	L	45	40	942	D M	M L S	N	---	N N	N	200	1600	N Y N									1,4,7		
Quercus turbinella		Desert Scrub Oak	4★	S	12	12	85	E M	L	---	N	---	N N	Y	80	200	N Y Y								1,6		
Quercus x undulata		Wavy Leaf Oak	4★	S	15	12	85	S M	L	---	N	---	N N	Y	80	200	N Y Y								1,2,6		
Quercus virginiana		Southern Live Oak	3★	L	40	25	368	S S M	M S	N	H	N Y	Y	200	1000	N Y N									1,2,3,8		
Quercus virginiana	'Cathedral'	Cathedral Live Oak	3★	L	30	25	368	S S M	M S	N	H	N Y	Y	200	700	N Y N									1,8		
Quercus virginiana	'Heritage'	Heritage Live Oak	3★	L	30	25	368	E S M	M S	N	H	N Y	Y	200	700	N Y N									1,8		
Quercus virginiana	'High Rise'	High Rise Live Oak	3★	L	35	20	236	S S M	M S	N	H	N Y	Y	200	400	N Y N									1,8		
Quercus wislizeni		Interior Live Oak	1★	L	30	25	368									Not Recommended									1,4		
Rhamnus alaternus		Italian Buckthorn	2★	S	15	12	85	E S	M	---	N	---	N N	N	80	200	N Y Y								1,4,10		
Rhus lanceolata		Prairie Flameleaf Sumac	3★	S	15	20	236	D M	L M	---	N	L	N N	N	80	300	N N Y								1		
Robinia pseudoacacia		Black Locust	1★	L	40	30	530									Not Recommended									1,2,8		
Robinia x ambigua		Idaho Locust	1★	L	40	30	530									Not Recommended									1,2,8,9		
Salix babylonica (=matsudana)		Chinese Willow	1★	L	40	35	722									Not Recommended									1,2,4,7,8,9		
Salix babylonica (=matsudana)	'Tortuosa', 'Snake'	Corkscrew Willow	1★	M	20	15	133									Not Recommended									1,4,7,8,9		
Salix gooddingii		Goodding Willow	2★	L	30	25	368	D F	H L F S	N	---	N	N	N	200	600	N Y N								1,6		
Salix x salamonii (=x sepulcralis)		Weeping Willow	0★	L	40	35	722									Not Recommended									1,4,7,8,9		
Sambucus cerulea (=nigra ssp. cerulea)		Blue Elderberry	4★	M	15	25	368	S M	M	L F	N	N	N Y	120	500	N Y N											
Sapindus saponaria var. drummondii		Western Soapberry	2★	M	25	25	368	D M	M	---	N	---	N Y	N	120	500	N Y N								1		
Schinus molle		California Pepper Tree	1★	L	30	30	530									Not Recommended									9		
Schinus terebinthifolius		Brazilian Pepper Tree	1★	M	25	25	368									Not Recommended									1,4,5,9		
Searsia lancea (=Rhus)		African Sumac	2★	M	20	20	236	E M F	L M	L S	N	L	N N	Y	120	300	N Y N								3,4,5		
Senegalia greggii (=Acacia)		Catclaw Acacia, Gregg's Catclaw	4★	S	15	20	236	D S M	V	---	Y	L	N N	N	80	300	Y N Y								6		
Sophora secundiflora		Texas Mountain Laurel	4★	S	15	12	85	E S	L M	S	N	---	N Y	Y	80	200	N N Y										
Sophora secundiflora	'Silver Sierra', 'Silver Peso'	Silver Mountain Laurel	4★	S	15	12	85	E S	L M	S	N	---	N Y	Y	80	200	N N Y										
Styphnolobium japonicum		Japanese Pagoda Tree	2★	L	30	30	530	D M	M	L	N	M	N Y	Y	200	1000	N N N								4,7		
Thuja occidentalis		Arborvitae	1★	S	15	12	85									Not Recommended									1,4,7		
Thuja plicata		Western Red Cedar	1★	M	20	12	85									Not Recommended									4,7		
Tipuana tipu		Tipu Tree	0★	L	35	35	722									Not Recommended									4,7,9		
Triadica sebifera		Chinese Tallow Tree	0★	M	25	15	133									Not Recommended									5,7,9		
Ulmus americana		American Elm	2★	X	50	40	942	D M	M	L	N	L	N N	N	240	1800	N Y N								1,2,7		
Ulmus crassifolia		Cedar Elm	3★	L	40	35	722	D M	M	---	N	---	N Y	N	200	1300	N Y N								1		
Ulmus glabra	'Camperdownii'	Camperdown Elm	2★	S	15	15	133	D S	M	---	N	---	N N	N	80	200	N Y Y								1,7,10		
Ulmus parvifolia		Lacebark Elm	1★	L	40	40	942									Not Recommended									1,2,3,4,7		
Ulmus pumila		Siberian Elm	0★	X	50	40	942									Not Recommended									1,5,8,7		
Ungnadia speciosa		Mexican Buckeye	3★	S	12	12	85	D S	L M	S	N	---	N N	N	80	200	N N Y										
Vachellia constricta (=Acacia)		Whitethorn Acacia	4★	S	15	15	133	D M	V	---	Y	M	N N	N	80	200	N N Y										
Vachellia farnesiana (=Acacia)		Sweet Acacia	3★	M	25	20	236	S M	L	S	Y	M	N Y	N	120	400	Y N N										
TREES (continued)																											
Vachellia gerrardii (=Acacia)		Red Thorn	3★	S	15	20	236	S S	V	---	Y	---	N N	Y	80	300	N N Y										
Vachellia rigidula (=Acacia)		Blackbrush Acacia	4★	S	12	12	85	S S	V	---	Y	---	N N	Y	80	200	N N Y										
Vachellia schaffneri (=Acacia)		Twisted Acacia	4★	M	20	25	368	D M	L S	Y	M	N Y	N	120	500	N N Y											
Vitex agnus-castus		Chaste Tree	2★	M	20	25	368	D M	M S	N	---	N Y	N	120	500	Y Y Y									2,4,5		
Vitex tinifolia	'Purpurea'	Arabian Lilac	1★	S	12	12	85									Not Recommended									1,4		
Xylosma congesta (=Croton congestus)		Xylosma	2★	S	15	12	85	E S	M	M	---	N	M	N	Y	80	200	N Y Y							1,4		
Zelkova serrata		Sawleaf Zelkova	1★	L	40	30	530									Not Recommended									1,2,4,7		

KEY																																		
Rating: Based on a combination of factors related to climate resiliency such as environmental tolerances (heat, cold), water efficiency, drought tolerance, pathogen resistance, along with some additional factors like diversity, maintenance needs, and invasiveness. Plants rated from 0★ (least appropriate) to 4★ (most appropriate)														Comments:																				
Tree Size (based on both height and width): Small (< 20 ft), Medium (20-29 ft), Large (30- 45ft), Extra Large (>45ft)														1. Organic mulch recommended																				
Tree Type: Deciduous, Evergreen, Semi-evergreen														2. Many cultivars																				
Growth Rate: Slow, Moderate, Fast														3. Potential diversity issues																				
Water Needs: Very Low, Low, Moderate, High														4. Low environmental tolerances																				
Excessive Litter: Leaves, Flowers, Seeds/Fruit														5. Invasive species																				
Biogenic Volatile Organic Compounds: Low, Medium, High, or data not available ----														6. Mojave native																				
														7. Low drought tolerance																				
														8. High pathogen susceptibility																				
														9. Reduced longevity																				
														10. Protected North or East facing microclimate necessary																				
Botanical Name	Cultivar	Common Name	Rating	S, M, L, X	Tree Size (feet)	Height (average) (feet)	Width (average) (sq. feet)	Coverage	Tree Type	D, E, S	S, M, F	Growth Rate	V, L, M, H	Water Needs	Excessive Litter	L, F, S	Yes or No	Spines or Thorns	Biogenic Volatile Organic Compounds (BVOC's)	L, M, H	Yes or No	Parking Lot Tree	Yes or No	Street Tree	Yes or No	Buffer Tree	Minimum Soil Surface Area (sq. feet)	Minimum Soil Volume (cu. feet)	Tolerates Compacted Soil	Yes or No	Compatible with Turf Grass	Yes or No	Compatible with Overhead Utilities	Comments
Ziziphus jujuba		Jujube	3★	M	25	20	236	D	S	S	M	S	S	M	S	Y	H	N	N	N	N	N	N	N	N	80	300	N	Y	N	N	1,2		
TREES - Under Review																																		
Celtis africana		African Hackberry	?	L	35	30	530	D	?	?	?	?	N	----	?	?	N	200	1000	?	?	N	?	?	N	?	?	?	?	N	1			
Fraxinus cuspidata		Fragrant Ash	?	M	20	15	133	D	?	?	?	?	N	----	?	?	N	120	200	N	?	Y	1,6,7											
Juglans major		Arizona Walnut	?	L	30	30	530	D	?	?	?	?	N	----	?	?	N	200	1000	N	?	N	1,7											
Juniperus deppeana	'McFetter'	Alligator Juniper	?	L	40	20	236	E	?	?	?	?	N	L	?	?	Y	200	300	N	?	Y	1											
Mariosousa willardiana		Palo Blanco	?	M	20	15	133	S	?	?	?	?	N	----	?	?	N	120	200	?	?	Y	4											
Pinus cembroides		Mexican Pinyon	?	M	25	15	133	E	?	?	?	?	N	M	?	?	Y	120	200	N	?	Y	1											
Pinus engelmannii		Apache Pine	?	X	60	35	722	E	?	?	?	?	N	----	?	?	N	240	1300	N	?	N	1											
Pinus edulis		Two Needle Pinyon	?	M	20	15	133	E	?	?	?	?	N	M	?	?	Y	120	300	N	?	N	1											
Pinus monophylla		Single Needle Pinyon	?	M	20	20	236	E	?	?	?	?	N	H	?	?	Y	120	300	N	?	Y	1,6											
Pinus quadrifolia		Parry Pinyon	?	M	25	20	236	E	?	?	?	?	N	----	?	?	Y	120	300	N	?	N	1											
Psoralethamnus spinosus		Desert Smoke Tree	?	S	15	15	133	D	?	?	?	?	Y	M	?	?	Y	80	200	?	N	Y	6											
Quercus arizonica		Arizona White Oak	?	X	45	40	942	S	?	?	?	?	N	----	?	?	Y	240	1300	N	?	N	1											
Quercus chrysolepis		Canyon Live Oak	?	L	30	25	368	E	?	?	?	?	N	H	?	?	Y	200	500	N	?	N	1,6											
Quercus emoryi		Emory Oak	?	L	30	25	368	S	?	?	?	?	N	----	?	?	Y	200	500	N	?	Y	1											
Quercus gambelii x macrocarpa		Bur-gambel Oak	?	L	30	30	530	D	?	?	?	?	N	----	?	?	N	200	1000	N	?	N	1											
Quercus gravesii		Chisos Red/Grave's Oak	?	L	35	30	530	D	?	?	?	?	N	----	?	?	N	200	1000	N	?	N	1											
Quercus grisea		Gray Oak	?	L	30	25	368	S	?	?	?	?	N	----	?	?	Y	200	500	N	?	N	1											
Quercus hypoleucoides		Silverleaf Oak	?	L	35	30	530	E	?	?	?	?	N	----	?	?	Y	200	1000	N	?	N	1											
Quercus oblongifolia		Mexican Blue Oak	?	M	25	25	368	E	?	?	?	?	N	----	?	?	Y	120	500	N	?	N	1											
Quercus sartorii		Mexican Red/Sator's Oak	?	M	25	25	368	D	?	?	?	?	N	----	?	?	N	120	500	N	?	N	1											
Styphnolobium affine (=Sophora affinis)		Eve's Necklace	?	M	25	15	133	S	?	?	?	?	N	----	?	?	N	120	350	N	?	N	1											
PALMS AND CYCADS																																		
Bismarckia nobilis		Bismarck Palm	0★	M	30	20	236																									1,7		
Brahea armata		Mexican Blue Palm	3★	M	25	15	133	E	S	S	M	----	Y	M	N	Y	N	120	200	N	N	N										1,7		
Brahea decumbens		Mexican Dwarf Blue Palm	3★	M	15	25	368	E	S	M	M	----	Y	----	N	N	N	120	500		Y	Y												
Butia capitata		Pindo Palm	1★	M	20	15	133																									1,4,7		
Chamaerops humilis		Mediterranean Fan Palm	2★	S	15	15	133	E	S	S	M	S	Y	M	N	N	N	80	200	Y	Y	Y										7		
Cycas revoluta		Japanese Sago Palm	1★	-	5	6	28																									1,7,10		
Livistona chinensis		Chinese Fan Palm	2★	S	15	10	59	E	S	M	M	----	Y	----	N	N	N	80	100	N	N	Y												
Livistona decipiens		Ribbon Fan Palm	2★	L	30	10	59	E	M	L	M	----	Y	----	N	N	N	200	100	N	N	N												
Livistona nitida		Carnarvon Fan Palm	2★	L	40	15	133	E	M	F	M	----	Y	----	Y	Y	N	200	200	N	Y	N												
Livistona saribus		Taraw Fan Palm	2★	L	30	15	133	E	S	M	S	M	Y	----	N	N	N	200	200	N	N	N												
Nannorrhops ritchieana		Mazari Palm	4★	S	10	12	85	E	M	L	----	N	----	Y	Y	N	80	150	N	N	Y													
Phoenix canariensis		Canary Island Date Palm	2★	L	40	30	530	E	S	M	S	Y	M	N	Y	N	200	1000	Y	Y	N											1,5,7,8		
Phoenix dactylifera		Date Palm	2★	X	60	20	236	E	S	M	S	Y	M	N	Y	N	240	300	Y	Y	N											1,5,7		
Phoenix reclinata		Senegal Date Palm	1★	M	20	15	133																									5,7		
Phoenix roebelenii		Pygmy Date Palm	0★	-	6	7	38																									1,4,7,10		
Phoenix rupicola		Cliff Date	2★	M	20	15	133	E	S	S	M	F, S	Y	----	N	N	N	120	200	N	Y	Y												
Phoenix sylvestris		Wild Date	2★	M	25	10	59	E	S	S	M	F, S	Y	----	N	N	N	120	100	N	Y	Y												
Phoenix theophrasti		Greek/Cretan Date Palm	2★	L	40	15	133	E	M	M	M	F	Y	----	Y	Y	N	200	200	N	Y	N												
Sabal causiarum		Puerto Rican Hat Palm	2★	L	35	15	133	E	M	M	M	F, S	N	----	Y	Y	N	200	200	N	Y	N												
Sabal domingensis		Hispaniolan Palmetto	2★	M	20	15	133	E	M	M	M	F, S	N	----	Y	Y	N	120	200	N	Y	N												
Sabal mexicana		Mexican Sabal Palm	3★	L	30	15	133	E	M	M	M	F	Y	----	Y	Y	N	200	200	N	Y	N												
Sabal palmetto		Palmetto	2★	L	45	15	133	E	M	M	M	F, S	N	----	Y	Y	N	200	200	N	Y	N												
Sabal x 'Riverside'	'Riverside'	Riverside Sabal Palm	3★	L	35	20	236	E	M	M	M, H	F, S	Y	----	Y	Y	N	200	300	N	Y	N												
Syagrus romanzoffiana		Queen Palm	0★	M	25	15	133																									4,7		
Trachycarpus fortunei		Windmill Palm	2★	M	20	10	59	E	S	S	M	F, S	N	----	N	N	N	120	100	N	Y	Y										1,7		
Washingtonia filifera		California Fan Palm	2★	X	50	15	133	E	S	M	L	M	F, S	Y	M	N	Y	N	240	200	Y	Y	N									1,7		
Washingtonia robusta		Mexican Fan Palm	2★	X	60	15	133	E	M	F	M	F, S	Y	M	N	Y	N	240	200	Y	Y	N										1,5,7		

CLV Preferred Tree List

KEY																								
Rating: environmental tolerance, water efficiency, diversity, maintenance needs, invasiveness, pathogen resistance.	Comments:	Downtown District Use:		Rating	Tree Size (S, M, L, X)	Height (average) (feet)	Width (average) (feet)	Coverage (Sq. Feet)	Tree Type (D, E, S)	Growth Rate (S, M, F)	Water Needs (V, L, M, H)	Excessive Litter (L, F, S)	Spines or Thorns (Yes or No)	Biogenic Volatile Organic Compounds (L, M, H)	Parking Lot Tree (Yes or No)	Street Tree (Yes or No)	Buffer Tree (Yes or No)	Minimum Soil Surface Area (Sq. Feet)	Minimum Soil Volume (Cu. Feet)	Tolerates Compacted Soil (Yes or No)	Compatible With Turf Grass (Yes or No)	Compatible With Overhead Utilities (Yes or No)	Comments	
Tree Size: Small (< 20 ft), Medium (20-29 ft), Large (30- 45ft), Extra Large (>45ft)	1 Organic mulch recommended	1 Historic Westside																						
Tree Type: Deciduous, Evergreen, Semievergreen	2 Many cultivars	2 Cashman																						
Growth Rate: Slow, Moderate, East	3 Potential diversity issues	3 Medical																						
Water Needs: Very Low, Low, Moderate, High	4 Low environmental tolerances	4 Market																						
Biogenic Volatile Organic Compounds: Low, Medium, High, or data not available --	5 Invasive species	5 Design																						
See Sheet 2 for Attribute Definitions	6 Mojave native	6 Gateway																						
	7 Low drought tolerance	7 18b																						
	8 High pathogen susceptibility	8 Civic & Business																						
	9 Reduced longevity	9 Resort & Casino																						
	10 Protected North or East facing microclimate necessary	10 Fremont East																						
	11 Founders	11 Founders																						
	12 Symphony Park	12 Symphony Park																						
Botanical Name	Common Name	District use	Cultivar	Rating	Tree Size (S, M, L, X)	Height (average) (feet)	Width (average) (feet)	Coverage (Sq. Feet)	Tree Type (D, E, S)	Growth Rate (S, M, F)	Water Needs (V, L, M, H)	Excessive Litter (L, F, S)	Spines or Thorns (Yes or No)	Biogenic Volatile Organic Compounds (L, M, H)	Parking Lot Tree (Yes or No)	Street Tree (Yes or No)	Buffer Tree (Yes or No)	Minimum Soil Surface Area (Sq. Feet)	Minimum Soil Volume (Cu. Feet)	Tolerates Compacted Soil (Yes or No)	Compatible With Turf Grass (Yes or No)	Compatible With Overhead Utilities (Yes or No)	Comments	
Extra Large Deciduous Trees																								
<i>Carya illinoensis</i>	Pecan		'Witchita'	3	X	50	40	942	D	M	H	L,S	N	---	N	N	N	240	1600	N	Y	N	1,2,7	
<i>Salix gooddingii</i>	Gooddings willow			3	X	60	50	1473	D	F	H	L,F,S	N	---	N	N	N	240	2500	N	Y	N	6	
<i>Ulmus americana</i>	American elm	11		3	X	50	60	2155	D	M	M	L	N	L	N	N	N	240	3300	N	Y	N	1,2,7	
Large Deciduous Trees																								
<i>Calia australis</i> ***	Mediterranean hackberry	8, 10, 11,		2	L	45	45	1193	D	M	M	L	N	---	N	Y	N	200	2100	N	Y	N	1	
<i>Calia occidentalis</i> ***	Common hackberry	8, 10, 11,		2	L	45	30	530	D	F	M	L	N	---	N	Y	N	200	1600	N	Y	N	1	
<i>Gleditsia triacanthos var inermis</i> ***	Honey locust		'Moraine'	2	L	35	30	530	D	M	M	S	N	M	N	Y	N	200	1000	N	Y	N	1,2	
<i>Koeleria paniculata</i>	Goldenrain tree	n		3	L	30	30	530	D	M	M	N	N	H	N	N	N	200	1000	N	Y	N	1,7	
<i>Maclura pomifera</i> ***	Osage orange	8, 10, 11	'White Shield'	3	L	40	35	722	D	M	M	L	N	---	N	Y	N	200	1300	N	Y	N	1,7	
<i>Parkinsonia florida</i>	Blue palo verde	5		2	L	30	30	530	D	M	V	S	N	M	Y	Y	Y	200	1000	Y	N	N		
<i>Parkinsonia praecox</i> ***	Palo brea	1, 3, 5, 6, 7, 11		1	L	35	30	530	D	M	V	S	Y	---	Y	Y	Y	200	1000	Y	N	N		
<i>Pistacia chinensis</i> ***	Chinese pistache	10	'Sarah's Radiance'	3	L	35	30	368	D	M	M	L,S	N	M	Y	Y	Y	200	700	Y	Y	N	1,2,3	
<i>Pistacia x atlantica</i> ***	Red push pistache	1, 4, 9, 10, 11, 12	'Red Push'	2	L	30	30	368	D	M	M	L	N	M	Y	Y	Y	200	700	Y	Y	N	1,3	
<i>Platanus occidentalis var. mexicana</i> ***	Mexican sycamore	8, 10, 11		3	L	45	35	722	D	F	M	L	N	H	N	Y	N	200	1000	N	Y	N	1,7	
<i>Populus alba</i>	White poplar			3	L	45	40	942	D	F	M	L	N	---	N	N	N	200	1600	N	Y	N	1,2,7,8	
<i>Prosopis glandulosa</i>	Thornless honey mesquite	1, 2, 5, 11	'Maverick', 'AZT'	2	L	30	30	530	D	F	L	S	N	---	Y	N	N	200	1000	Y	N	N	8	
<i>Prosopis glandulosa var. glandulosa</i>	Texas honey mesquite			2	L	30	30	530	D	F	L	S	Y	---	Y	N	N	200	1000	Y	N	N		
<i>Quercus buckleyi</i> ***	Buckley oak		'Red Rock'	3	L	30	30	530	D	S	M	L	N	H	N	Y	N	200	1000	N	Y	N	1,7	
<i>Quercus canbyi</i>	Canby oak	3, 8, 11		2	L	30	30	530	D	M	M	N	---	N	N	N	200	1000	N	Y	N	1		
<i>Quercus douglasii</i> ***	Blue oak	1, 8, 10, 11		2	L	30	30	530	D	M	M	N	M	N	Y	N	200	1000	N	Y	N	1		
<i>Quercus lobata</i>	Valley oak			3	L	40	40	942	D	M	M	L,S	N	M	N	N	200	1600	N	Y	N	1,7		
<i>Quercus macrocarpa</i> ***	Bur oak	8, 10, 11		2	L	45	40	942	D	S	M	L,S	N	---	N	Y	N	200	1600	N	Y	N	1	
<i>Quercus muhlenbergii</i>	Chinquapin oak			2	L	30	30	530	D	S	M	L,S	N	---	N	N	N	200	1000	N	Y	N	1	
<i>Quercus shumardii</i> ***	Shumard oak	3, 8, 11		3	L	45	30	530	D	M	M	L,S	N	---	N	Y	N	200	1000	N	Y	N	1,7	
<i>Ulmus crassifolia</i> ***	Cedar elm	3, 4, 10, 11		2	L	30	35	722	D	M	M	N	---	N	Y	N	200	1300	N	Y	N	1		
<i>Vachellia farnesiana</i> ***	Sweet acacia	1, 8		2	L	30	25	368	D	F	L	S	Y	M	N	Y	N	200	700	Y	N	N		
<i>Vachellia schaffneri</i>	Twisted acacia	5		1	L	35	45	1193	D	M	L	S	Y	---	N	Y	N	200	2100	N	N	N		
Medium Deciduous Trees																								
<i>Bauhinia lunarioides</i>	Orchid tree	3, 8, 11		1	M	20	20	236	D	M	L	N	---	N	N	N	120	300	N	N	Y	1		
<i>Bauhinia macranthera</i>	Chihuahuan orchid tree			2	M	20	20	236	D	M	M	N	---	N	N	N	120	300	N	N	Y	1		
<i>Calia reticulata</i> ***	Netleaf hackberry	1, 5, 6, 7, 8, 11, 12		1	M	20	20	236	D	S	M	N	L	N	Y	N	80	300	N	N	Y	6		
<i>Cercis canadensis var. mexicana</i>	Mexican redbud	3, 8, 11		2	M	20	25	368	D	S	M	N	L	N	N	N	120	500	N	Y	Y	1		
<i>Chilopsis linearis</i> ***	Desert willow	3, 5, 6, 7, 8		2	M	25	20	236	D	M	M	S	N	M	N	Y	N	120	300	Y	N	N	2,3,6	
<i>Ficus carica</i>	Fig		'Brown Turkey'	3	M	20	20	236	D	M	M	L,S	N	H	N	N	120	300	N	Y	N	1,2		
<i>Fraxinus anomala</i>	Single leaf ash	1, 11		2	M	20	25	368	D	M	M	N	---	N	N	N	120	500	N	Y	Y	1,6		
<i>Geoffroea decorticans</i>	Chilean palo verde			2	M	25	25	368	D	S	V	S	Y	---	Y	Y	Y	120	500	N	N	N	4	
<i>Harvardia mexicana</i> ***	Mexican ebony	1, 2, 5, 6, 7, 8, 10		1	M	25	25	368	D	M	L	Y	---	Y	Y	N	120	500	N	N	N			
<i>Leucaena retusa</i>	Golden leadball tree	5, 6, 7		1	M	20	20	236	D	M	L	N	---	N	N	N	120	300	N	N	Y			
<i>Morus alba</i> (Female)	Fruiting, Contorted mulberry		'Unryu'	3	M	25	25	368	D	M	M	L,F,S	N	---	N	N	N	120	500	N	Y	N	1,2,7	
<i>Olneya tesota</i> ***	Desert ironwood			2	M	25	25	368	D	S	V	Y	---	Y	M	Y	Y	120	500	N	Y	N	4	
<i>Parkinsonia microphylla</i> ***	Foothill palo verde	2, 5		1	M	20	20	236	D	S	V	Y	---	Y	M	N	Y	Y	120	300	N	N	Y	6
<i>Parkinsonia x sonorae</i>	Sonoran hybrid palo verde			1	M	20	20	236	D	S	V	Y	---	Y	M	N	Y	Y	120	300	N	N	Y	
<i>Pistacia vera</i>	Pistachio			3	M	20	15	133	D	M	M	S	N	M	N	N	N	120	200	N	Y	Y	1,2	
<i>Prosopis glandulosa var. torreyana</i>	Western honey mesquite			1	M	20	20	236	D	M	V	L	Y	---	N	Y	N	120	300	Y	N	Y	6,8	
<i>Prosopis pubescens</i>	Screwbean mesquite	11		1	M	20	25	368	D	M	V	S	Y	---	N	N	N	120	500	N	Y	N	6	
<i>Prunus dulcis</i>	Almond			3	M	25	25	368	D	M	M	L,S	N	---	N	N	N	120	500	N	Y	N	1,2	
<i>Prunus mexicana</i>	Mexican plum	1, 8, 9		3	M	25	25	368	D	M	M	S	N	---	N	N	N	120	500	N	Y	N	1	
<i>Punica granatum</i>	Pomegranate			3	M	20	15	133	D	M	M	S	Y	---	N	N	N	120	200	N	N	Y		
<i>Quercus gambelii</i>	Gambel oak			2	M	25	25	368	D	M	M	S	N	M	N	N	N	120	500	N	Y	N	1,6	
<i>Sapindus saponaria var. drummondii</i> ***	Western soapberry			2	M	25	25	368	D	M	M	N	---	N	Y	N	120	500	N	Y	N	1		
Small Deciduous Trees																								
<i>Acer ginnala</i>	Amur maple			3	S	15	15	133	D	S	H	L	N	---	N	N	N	80	200	N	Y	Y	1,7	
<i>Cercis canadensis var. texensis</i>	Texas redbud	3, 8, 11	'Oklahoma'	2	S	15	20	236	D	S	M	N	L	N	N	N	80	300	N	Y	Y	1		
<i>Cercis occidentalis</i>	Western redbud			3	S	15	15	133	D	S	M	N	L	N	N	N	80	200	N	Y	Y	6		
<i>Condalia hookeri</i>	Brazilian bluewood			2	S	15	15	133	D	M	V	Y	---	N	N	N	80	200	N	N	Y			
<i>Harvardia pallens</i>	Tenaza			2	S	15	15	59	D	M	L	N	---	N	N	N	80	100	N	N	Y			
<i>Rhus copallinum var. lanceolata</i>	Prairie flameleaf sumac	1, 11		2	S	15	20	236	D	M	M	N	L	N	N	N	80	300	N	N	Y	1		
<i>Senegalia greggii</i>	Cat claw acacia			1	S	15	20	236	D	S	V	Y	L	N	N	N	80	300	Y	N	Y	6		
<i>Ulmus crassifolia</i>	Camperdown wych elm		'Camperdownii'	2	S	15	15	133	D	S	M	N	---	N	N	N	80	200	N	Y	Y	1,7,10		
<i>Ungadia speciosa</i>	Mexican buckeye			2	S	15	15	133	D	S	M	N	---	N	N	N	80	200	N	Y	Y			
<i>Vachellia constricta</i>	Whitethorn acacia			1	S	15	15	133	D	M	V	Y	---	N	N	N	80	200	N	N	Y			
<i>Ziziphus jujube</i>	Jujube			2	S	25	20	236	D	S	M	S	Y	H	N	N	N	80	300	N	Y	N	1,2	
Extra Large Evergreen Trees																								
<i>Eucalyptus camaldulensis</i> ***	Red river gum			2	X	55	45	1193	E	M	M	N	N	H	N	Y	Y	240	2100	N	Y	N	5	
<i>Eucalyptus rudis</i> ***	Desert gum			2	X	50	50	1473	E	M	M	N	N	H	N	Y	Y	240	2500	N	N	N		
<i>Pinus brutia</i>	Turkish pine			3	X	65	50	1473	E	F	M	L	N	---	N	N	Y	240	2500	N	Y	N	1	
<i>Pinus halepensis</i>	Aleppo pine			3	X	55	40	942	E	M	M	L	N	L	N	N	Y	240	1600	N	Y	N	1,3,8	
<i>Pinus pinea</i>	Stone pine			3	X	60	40	942	E	M	M	L	N	M	N	N	Y	240	1600	N	Y	N	1,8	
<i>Pinus sabiniana</i>	Foothill pine			2	X	55	40	942	E	M	M	L,S	N	L	N	N	Y	240	1600	N	Y	N	1	

CLV Preferred Tree List

KEY													
Rating: environmental tolerance, water efficiency, diversity, maintenance needs, invasiveness, pathogen resistance.		Comments:		Downtown District Use:									
Tree Size: Small (< 20 ft), Medium (20-29 ft), Large (30-45ft), Extra Large (>45ft)		Tree Type: Deciduous, Evergreen, Semievergreen		Growth Rate: Slow, Moderate, Fast		Water Needs: Very Low, Low, Moderate, High		Biogenic Volatile Organic Compounds: Low, Medium, High, or data not available --		*** denotes street trees		See Sheet 2 for Attribute Definitions	

