



CITY OF WILDOMAR

WATER EFFICIENT / CONSERVATION LANDSCAPE STANDARDS MANUAL

Adopted by the Wildomar City Council on November 12, 2015

RESOLUTION NO. 2015-70

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WILDOMAR, CALIFORNIA, ADOPTING ELSINORE VALLEY MUNICIPAL WATER DISTRICT'S (EVMWD) WATER EFFICIENT LANDSCAPE STANDARDS AS A SUPPLEMENT TO THE CITY'S EXISTING WATER EFFICIENT LANDSCAPE STANDARDS (SECTION 17.276 OF THE WMC)

WHEREAS, the City Council recognizes that being within the territory supplied by EVMWD, it is beneficial to encourage and promote the conservation and efficient use of water in landscapes to help prevent the waste of this valuable resource; and

WHEREAS, the City Council recognizes that landscape design, installation, maintenance, and management of water for landscaping purposes can and should be water efficient in accordance with current city regulations and those proposed by EVMWD; and

WHEREAS, the City Council recognizes that EVMWD has met with stakeholders within local agencies and the development industry to develop water efficient landscape standards; and

WHEREAS, the City Council recognizes that the city's current water efficient landscape standards, and those adopted by EVMWD are designed to preserve the health, safety, and welfare of Wildomar's residents, businesses and the general public.

NOW, THEREFORE, the City Council of the City of Wildomar does hereby resolve, determine and order as follows:

SECTION 1 **Council Findings**

The City Council hereby finds that this Resolution will: (1) Promote the value and benefits of conserving water resources as it directly relates to landscaping; (2) Establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects; (3) Reduce water demands from landscapes without a decline in landscape quality or quantity; (4) Retain flexibility and encourage creativity through appropriate design; (5) Establish provisions for water management practices and water waste prevention to minimize overspray and/or runoff; (6) Use water efficiently for landscapes by setting a Maximum Applied Water Allowance (MAWA) standards as an upper limit for water use and reduce water use to the lowest practical amount; and (7) Assure the attainment of water efficient landscape goals by requiring that landscapes not exceed a maximum water demand of sixty percent (60%) of its reference evapotranspiration (ET₀) or any lower percentage as may be required.

SECTION 2. CEQA.

The City Council hereby finds that adoption of this Resolution is not subject to the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) pursuant to Section 15307 (the activity assures the maintenance, restoration, enhancement, or protection of a natural resource) of the State CEQA Guidelines, California Code of Regulations, Title 14, Resolution 3, since it makes and implements policies and procedures for ensuring that water resources are conserved by reducing the water demands of landscaping.

SECTION 3. City Council Action:

The City Council hereby adopts the EVMWD's Water Efficient Landscape Standards attached hereto as Exhibit 1 of this Resolution as a supplement to the City's Water Efficient Landscape Standards outlined in Section 17.276 of the Wildomar Municipal Code.

PASSED, APPROVED AND ADOPTED this 12th day of November, 2015.

Ben J. Benoit
Mayor

APPROVED AS TO FORM:

ATTEST:

Thomas D. Jex
City Attorney

Debbie A. Lee, CMC
City Clerk

**EXHIBIT 1
OF ATTACHMENT A**

EVMWD ADOPTED WATER EFFICIENT LANDSCAPE STANDARDS

EVMWD WATER EFFICIENT LANDSCAPE STANDARDS

I. PURPOSE

- A. The City determines that the purpose of the following landscaping standards is to:
1. Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
 2. Establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects;
 3. Reduce water demands from landscapes without a decline in landscape quality or quantity;
 4. Retain flexibility and encourage creativity through appropriate design;
 5. Establish provisions for water management practices and water waste prevention that eliminate water waste from overspray and/or runoff;
 6. Use water efficiently without waste by setting a Maximum Applied Water Allowance (MAWA) as an upper limit for water use and reduce water use to the lowest practical amount;
 7. Assure the attainment of water efficient landscape goals by requiring that landscapes not exceed a maximum water demand of sixty percent (60%) of its reference evapotranspiration (ET_0) or any lower percentage as may be required; and

II. APPLICABILITY

- A. This Section shall apply to all of the following landscape projects:
1. All new development projects, regardless of land use or zoning, that is part of the city's development process and which requires Planning Director, Planning Commission and/or City Council review and approval.
 2. Rehabilitated landscapes in all residential zones that require a city building and/or landscape permit as part of the plan check process.
 3. Rehabilitated landscapes in all commercial, industrial, and manufacturing zones that require a city building and/or landscape permit as part of the plan check process.
- B. Landscape projects listed in paragraph A above are also subject to the water efficient landscape requirements of Section 17.276 of the WMC. To the extent that there are any conflicts between this resolution and the

provisions of Section 17.276, with respect to the standards applicable to a landscape project listed in paragraph A, the more stringent standard shall govern.

III. PROVISIONS FOR THE REVIEW AND CERTIFICATION OF LANDSCAPING AND IRRIGATION

An applicant proposing any new or rehabilitated landscape shall prepare and submit a detailed landscape and irrigation plan prepared by a registered landscape architect to the City for review and approval. The plans shall be reviewed to ensure that all components of the plans adhere to the requirements of this resolution and Section 17.276 of the WMC. No certificate of occupancy or other final City approval shall be issued until the City reviews and approves the landscape and irrigation plans and the landscape and irrigation are installed in accordance with the approved plans. A copy of the approved landscape and irrigation plans and conditions of approval shall be provided to the property owner or site manager along with any other information normally forwarded to the property owner or site manager.

Applications submitted to the City shall include the following information:

- A. Landscape Plan Requirements. The following requirements shall be implemented in tandem with the landscape standards contained Section 17.276 of the WMC.
 1. The "Riverside County Guide to California Friendly Landscaping" (Landscaping Guide), Western Municipal Water District's Water-wise 140, or any other plant list that promotes the use of water efficient or California native plant materials is hereby incorporated by reference to assist with developing water efficient landscapes.
 2. Plant types shall be grouped together in regard to their plant zones including water, soil, sun, and shade requirements and in relationship to buildings. Plants with different water needs shall be irrigated separately. Plants with the following classifications shall be grouped accordingly, consistent with the **Water Use Classification of Landscape Species (WUCOLS)** low and very low as noted in Appendix A. Deviation from these classification groupings shall not be permitted.
 3. Invasive species of plants shall be avoided especially near parks, buffers, greenbelts, water bodies, and open spaces because of their potential to cause harm to environmentally sensitive areas.
 4. All exposed surfaces of non-turf areas within the developed landscape area shall be mulched (i.e., wood mulch or decomposed granite mulch) at one and one half inches (1 ½") deep with a minimum three inch (3") layer of material, except in areas where groundcover has been planted.
 5. Stabilizing erosion control products shall be used on slopes.

6. Turf areas:
 - a. Residential front yards and parkways shall consist of no turf and contain only low to very low water use plant and shrub materials outlined in the **Water Use Classification of Landscape Species (WUCOLS)** list as noted in Appendix A.
7. Recycled water shall be used where available as the source for irrigation and decorative water features.
8. Landscape Plans shall identify and site the following:
 - a. New and existing trees, shrubs, ground covers, turf areas & synthetic turf areas within the proposed landscape area;
 - b. Designation of hydrozones;
 - c. Maximum Applied Water Allowance (MAWA):
 - i. MAWA means the upper limit of annual applied water for the established landscaped area. It is based upon the area's reference evapotranspiration (ET) - Adjustment Factor and the size of the landscape area.
 - ii. Current formula and example of calculations are noted in Appendix B & C
 - iii. For the purposes of determining the Maximum Applied Water Allowance (MAWA), average irrigation efficiency is assumed to be 0.71. Irrigation systems shall be designed, maintained, and managed to meet or exceed an average irrigation efficiency of 0.71.
 - d. Estimated Total Water Use (ETWU):
 - i. ETWU is estimated water use based upon the types of plant material used in your design (based upon WUCOLS classifications). This cannot exceed the MAWA
 - ii. Current formula and example of calculations are noted in Appendix B & C
 - iii. Landscaping plans shall provide ETWU (in the same units as the MAWA) for each valve circuit in the irrigation hydrozone. The sum of all ETWU calculations shall not exceed the MAWA for the project.
 - iv. The plant factor used shall be from the Water Use Classification of Landscape Species (WUCOLS). The plant factor for low water use plants range from 0.1 to 0.3, and very low water use plants are less than 0.1.

B. Irrigation Design Plan Requirements:

1. Irrigation systems shall be designed, maintained, and managed to meet or exceed an average irrigation efficiency of 0.71.
2. All irrigation systems shall be designed to prevent runoff, over-spray, low-head drainage and other similar conditions where water flows off-site on to adjacent property, non-irrigated areas, walk, roadways, or structures. Irrigation systems shall be designed, constructed, managed, and maintained to achieve as high an overall efficiency as possible. The irrigation system shall be designed to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.
3. Landscaped areas shall be provided with a smart irrigation controller which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions. The planting areas shall be grouped in relation to moisture control zones based on similarity of water requirements (i.e., turf separate from shrub and groundcover, full sun exposure areas separate from shade areas, top of slope separate from toe of slope). Additional water conservation technology (i.e., soil moisture sensors, rain/wind sensors) may be required, where necessary, at the discretion of the City.
 - a. Water systems for common open space areas shall use non-potable water, if approved facilities are made available by the water purveyor. Provisions for the conversion to a non-potable water system shall be provided within the landscape plan. Water systems designed to utilize non-potable water shall be designed to meet all applicable standards of the California Regional Water Quality Control Board, the Riverside County Health Department, and the water purveyor.
4. Separate valves shall be provided for separate water use planting areas, so that plants with similar, water needs may be irrigated by the same irrigation valve. All installations shall rely on highly efficient state of the art irrigation systems to eliminate runoff and maximize irrigation efficiency.
5. Static water pressure, dynamic or operating pressure and flow reading of the water supply shall be measured. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at the installation.
6. The capacity of the irrigation system shall not exceed:
 - a. the capacity required for peak water demand based on water budget calculations;

- b. meter capacity; or
 - c. backflow preventer type and device capacity.
7. Sprinkler heads and other emission devices shall have matched precipitation rates and pressure compensating.
 8. In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.
 9. Slopes greater than 25% shall not be irrigated with an irrigation system with a precipitation rate exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the submittal, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.
 10. Long-narrow, or irregularly shaped areas including turf less than eight (8) feet in width in any direction shall be irrigated with subsurface irrigation or low-volume irrigation technology.
 11. Overhead irrigation shall not be permitted within 24 inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:
 - a. the landscape area is adjacent to permeable surfacing and no runoff occurs; or
 - b. the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or
 - c. the irrigation designer specifies an alternative design or technology, as part of the submittal and clearly demonstrates strict adherence to the irrigation design plan requirements. Prevention of overspray and runoff must be confirmed during the irrigation audit.
 12. Irrigation systems shall be equipped with the following:
 - a. A smart irrigation controller as noted in this Section III(B)(3) of this Resolution.
 - b. A rain sensing device to prevent irrigation during rainy weather.
 - c. Anti-drain check valves installed at strategic points to minimize or prevent low-head drainage.

- d. A manual shut-off valve shall be required as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency or routine repair;
 - e. A pressure regulator when the static water pressure is above or below the recommended operating pressure of the irrigation system;
 - f. Backflow prevention devices; and
 - g. Protection components for all risers near high traffic areas. In high traffic areas, the preferred method instead of risers is to utilize “pop-up” style sprinkler heads.
13. Dedicated landscape water meters shall be required for all projects with a landscape area equal to or greater than 5,000 square feet. Single-family residences and properties used for the commercial production of agricultural crops or livestock are exempt from this provision (California Water Code, Section 535).

IV. CERTIFICATE OF COMPLIANCE

Certificate of Compliance Requirements.

Prior to issuance of a certificate of occupancy or final inspection for a project subject to these standards, a Certificate of Compliance shall be submitted to the City certifying that the landscaping has been completed in accordance with the approved planting, irrigation, plans for the project. The Certificate of Compliance shall be signed by the Applicant’s licensed Landscape Architect and/or Certified Irrigation Auditor and provided to the City. Said certificate shall indicate the following information:

1. Date.
2. Project information (i.e., city project name and number).
3. The landscape has been installed in conformance with the approved planting and irrigation plans.
4. Irrigation audit report performed by a licensed landscape architect or certified irrigation auditor after project installation (audit report shall be attached).
5. The smart irrigation controller has been set according to the irrigation schedule.
6. The irrigation system has been adjusted to maximize irrigation efficiency and eliminate overspray and runoff.

B. Irrigation Audits.

At a minimum, all landscape irrigation audits shall comply with the Irrigation Association's "Certified Landscape Irrigation Auditor Training Manual" and shall be conducted by a certified landscape irrigation auditor. This document can be found online at the Irrigation Association's website (<http://www.irrigation.org/default.aspx>).

C. Inspections.

The City shall have the right to enter upon the project site at any time before, during and after installation of the landscaping, to conduct inspections to ensure compliance with these standards prior to issuing a Certificate of Occupancy.

V. CEMETERIES, PARKS AND SCHOOLS

New cemeteries, parks and schools refer to the provisions of Section III – Provisions for the Review and Certification of Landscaping and Irrigation and use Appendix C for MAWA and ETWU formulas.

VI. DEFINITIONS

The terms used in this Resolution have the meaning set forth below:

"applied water" means the portion of water supplied by the irrigation system to the landscape.

"backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

"certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization, or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

"check valve" or "anti-drain valve" means a valve located under a sprinkler head, or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

"controller" means an automatic timing device used to remotely control valves to operate an irrigation system. A "Smart" irrigation controller is a *weather-based* irrigation controller or a *self-adjusting* irrigation controller. A *weather-based* controller is a controller that uses evapotranspiration or weather data to determine when to irrigate. A *self-adjusting* irrigation controller is a controller that uses sensor data (i.e., soil moisture sensor).

"drip irrigation" means any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume

irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

"emitter" means a drip irrigation emission device that delivers water slowly from the system to the soil.

"established landscape" means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

"Estimated Total Water Use" (ETWU) is estimated water use based upon the types of plant material used in your design (based upon WUCOLS classifications). This cannot exceed the MAWA.

"ET adjustment factor" (ETAF) means a factor of 0.6, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. A combined plant mix with a site-wide average of 0.43 is the basis of the plant factor portion of this calculation. For purposes of the ETAF, the average irrigation efficiency is 0.71. Therefore, the ET adjustment factor is $(0.6) = (0.6/0.71)$. ETAF for a Special Landscape Area shall not exceed 1.0. ETAF for existing, non-rehabilitated landscapes is 0.84

"flow rate" means the rate at which water flows through pipes, valves, and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.

"hardscapes" means any durable material (pervious and non-pervious).

"hydrozone" (HA) means a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.

"infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

"invasive plant species" means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. Invasive species may be regulated by County agricultural agencies as noxious species. "Noxious" weeds means any weed designated by the Weed Control Act and identified on a Regional District noxious weed control list. Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.

"irrigation audit" means an in-depth evaluation of the performance of an irrigation system conducted by a Certified Landscape Irrigation Auditor. An irrigation audit includes, but is not limited to: inspection, system tune-up, system test with distribution uniformity or emission uniformity, reporting overspray or runoff that causes overland flow, and preparation of an irrigation schedule.

"irrigation efficiency" (IE) means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum average irrigation efficiency for purposes of this Resolution is 0.71. Greater irrigation efficiency can be expected from well designed and maintained systems.

"landscape architect" means a person who holds a license to practice landscape architecture in the State of California Business and Professions Code, Section 5615.

"landscape area" means all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel, or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non-development (e.g. open spaces and existing native vegetation).

"landscape contractor" means a person licensed by the State of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

"landscape project" means the total area of landscape in a project as defined in "landscape area" for the purposes of this Resolution.

"lateral line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

"low volume irrigation" means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip emitters, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

"Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area. It is based upon the area's reference evapotranspiration, the ET- Adjustment Factor, and the size of the landscape area. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance. Special Landscape Areas, including recreation areas, areas permanently and solely dedicated to edible plants such as orchards and vegetable gardens, and areas irrigated with recycled water are subject to the MAWA with an ETAF not to exceed 1.0.

"microclimate" means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

"mulch" means any organic material such as leaves, bark, straw, compost, or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing

evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

"new construction" means, for the purposes of this Resolution, a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

"operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

"overhead sprinkler irrigation systems" means systems that deliver water through the air (e.g., spray heads and rotors).

"overspray" means the irrigation water which is delivered beyond the target area.

"permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

"pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.

"plant factor" or "plant water use factor" (PF) is a factor, when multiplied by ET_0 , estimates the amount of water needed by plants. For purposes of this Resolution, the plant factor for low water use plants range from 0.1 to 0.3, and very low water use plants are less than 0.1. Plant factors cited in this Resolution are derived from the Department of Water Resources 2000 publication, "Water Use Classification of Landscape Species."

"precipitation rate" means the rate of application of water measures in inches per hour.

"project applicant" means the individual or entity submitting a landscape documentation package to request a permit, plan check, or design review from the City. A project applicant may be the property owner or his or her designee.

"rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.

"recycled water," "reclaimed water," or "treated sewage effluent water" means treated or recycled waste water of a quality suitable for non-potable uses such as landscape irrigation and water features. This water is not intended for human consumption.

"reference evapotranspiration" or " ET_0 " means a standard measurement of environmental parameters which affect the water use of plants. ET_0 is given expressed in inches per day, month, or year, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowances so that regional differences in climate can be accommodated. Refer to the CIMIS Reference Evapotranspiration Zones Map, Department of Water Resources, 1999.

"rehabilitated landscape" means any re-landscaping project that requires a permit, plan check, or design review.

"runoff" means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, runoff may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.

"soil moisture sensing device" or "soil moisture sensor" means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

"sprinkler head" means a device which delivers water through a nozzle.

"static water pressure" means the pipeline or municipal water supply pressure when water is not flowing.

"turf" means a ground cover surface of mowed grass. Annual blue grass, Kentucky blue grass, Perennial rye grass, Red fescue, and Tall fescue are cool-season grasses. Bermuda grass, Kikuyu grass, Seashore Paspalum, St. Augustine grass, Zoysia grass, and Buffalo grass are warm-season grasses.

"valve" means a device used to control the flow of water in the irrigation system.

"water conserving plant species" means a plant species identified as having a low plant factor.

"WUCOLS" means the **Water Use Classification of Landscape Species** published by the University of California Cooperative Extension, the Department of Water Resources, and the Bureau of Reclamation (Appendix A of this Resolution).

**APPENDIX A, B & C
OF
EXHIBIT 1, ATTACHMENT A**

**Water Use Classification of Landscape Species (WUCOLS)
Matrix**

Appendix A
WUCOLS

Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S					Abelmoschus manihot (Hibiscus manihot)	sunset muskmallow	?	?	?	L	?	?	
						S				N	Abutilon palmeri	Indian mallow	L	L	L	L	M	M	
						S					Acacia aneura	mulga	/	L	L	L	/	L	
								T			Acacia baileyana	Bailey acacia	L	L	L	L	/	/	
						S					Acacia boormanii	Snowy River wattle	L	L	L	L	/	L	
						S		T			Acacia constricta	whitethorn acacia	?	L	L	L	L	L	
						S					Acacia coventyi	blue bush	?	L	L	L	?	?	
						S					Acacia cultriformis	knife acacia	L	L	L	L	/	/	
								T			Acacia dealbata	silver wattle	VL	L	L	L	/	/	
								T			Acacia decurrens	green wattle	VL	L	L	L	/	/	
						S					Acacia glaucoptera	clay wattle	L	/	L	L	/	/	
						S		T		N	Acacia greggii	catclaw acacia	L	L	L	L	L	L	
						S					Acacia iteaphylla	willow wattle	L	L	L	L	?	?	
						S		T			Acacia longifolia	Sydney golden wattle	L	L	L	L	/	/	
								T			Acacia melanoxylon	blackwood acacia	VL	L	L	L	/	/	
			Gc			S					Acacia redolens	prostrate acacia	VL	VL	VL	L	L	L	
						S		T			Acacia saligna	blue leaf wattle	L	L	L	L	/	L	
								T			Acacia stenophylla	eumong/shoestring acacia	VL	L	L	L	/	L	
						S					Acacia vestita	hairy wattle	?	L	L	L	?	?	
								T			Acacia willardiana	palo blanco	/	/	/	L	/	L	
						S				N	Acalypha californica	copper leaf	/	/	VL	L	?	?	
				P							Achillea clavennae	silvery yarrow	L	L	L	L	/	/	
				P							Achillea filipendulina	fern leaf yarrow	L	L	L	L	?	?	
			Gc	P							Achillea millefolium (non-native hybrids)	yarrow (non-native hybrids)	M	L	M	L	L	L	
			Gc	P						N	Achillea millefolium (CA native cultivars)	yarrow	L	L	L	L	L	L	
				P						N	Acmispon glaber (Lotus scoparius)	deer weed	VL	VL	VL	VL	?	?	
				P						N	Acmispon rigidus (Lotus rigidus)	rock pea	?	?	?	L	?	?	
						S					Adenanthos drummondii	woolly bush	L	?	L	L	?	?	
				P							Adenium obesum	desert rose	/	/	/	L	/	L	
			Gc			S				N	Adenostoma fasciculatum	chamise	VL	VL	VL	VL	/	/	
						S		T		N	Adenostoma sparsifolium	red shanks/ribbonwood	VL	?	VL	VL	/	/	
				P			Su				Aeonium spp.	Canary Island rose	L	L	L	L	/	/	
								T		N	Aesculus californica	California buckeye	VL	VL	VL	L	/	/	
				P		S					Agave americana (and thick-leaved relatives) (C)	agave	VL	VL	VL	VL	VL	VL	
				P		S					Agave attenuata (and thin-leaved relatives) (C)	agave	L	L	L	L	L	L	
								T			Agonis flexuosa and cvs.	peppermint tree	L	/	L	L	/	/	
								T			Ailanthus altissima	tree of heaven	VL	VL	L	L	L	L	
								T			Albizia julibrissin	silk tree	L	L	L	L	M	M	
Bu										N	Allium spp. mostly from CA or Mediterranean	allium	VL	VL	L	VL	L	M	
								T			Allocasuarina verticillata (Casuarina stricta)	coast beefwood	L	L	L	L	M	M	
						S	Su	T		N	Aloe spp. (CA native and non-native)	aloe	L	L	L	L	/	L	
						S					Aloysia triphylla	lemon verbena	L	L	L	L	L	L	
Bu											Alstroemeria ligtu hybrids and cvs.	alstroemeria (ligtu)	L	L	?	L	?	/	
Bu											Alstroemeria spp. hybrids and cvs.	Peruvian lily	M	M	M	L	?	M	
						S					Alyogyne hakeifolia	red centered hibiscus	/	/	L	L	/	/	
						S					Alyogyne huegelii	blue hibiscus	L	L	L	L	/	M	
Bu											Amaryllis belladonna	naked lady	VL	VL	VL	VL	L	L	
						S					Ambrosia monogyra (Hymenoclea monogyra)	burrow bush	?	?	VL	VL	VL	VL	
			Gc							N	Ambrosia pumila	San Diego ragweed	?	VL	VL	VL	?	?	
						S				N	Amelanchier utahensis	Utah service berry	M	M	?	L	?	?	
						S				N	Amorpha californica (shade)	California false indigo bush	L	?	L	L	?	?	
						S				N	Amorpha fruticosa	false indigobush	?	?	M	L	M	?	
				P							Anacyclus pyrethrum depressus	Mount Atlas daisy	M	M	L	L	?	?	
				P						N	Anaphalis margaritacea	pearly everlasting	L	M	L	L	?	?	
Bu											Anemone coronaria	poppy-flowered anemone	L	M	?	VL	?	?	
				P							Anigozanthos bicolor	two-colored kangaroo paw	L	?	M	L	/	/	
				P							Anigozanthos flavidus	kangaroo paw	L	L	M	L	/	/	
				P							Anigozanthos hybrids & cvs.	kangaroo paw	L	L	M	L	/	/	
				P							Anigozanthos manglesii	red and green kangaroo pa	L	?	M	L	/	/	
				P							Anigozanthos rufus	red kangaroo paw	L	?	M	L	/	/	
				P							Anigozanthos viridis	green kangaroo paw	L	L	M	L	/	/	
						S					Anisacanthus spp.	desert honeysuckle	?	?	L	L	L	L	

Appendix A WUCOLS

Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
			Gc						V		Antigonon leptopus	coral vine	M	/	L	L	/	L	
				P							Antirrhinum hispanicum	Spanish snapdragon	L	L	L	L	?	?	
				P						N	Antirrhinum multiflorum	multiflowered snapdragon	?	?	M	L	?	?	
				P						N	Apocynum cannabinum	Indian hemp	?	M	?	L	?	?	
			Gc	P							Aptenia 'Red Apple'	ice plant (Red Apple)	L	L	L	L	/	/	
			Gc	P							Aptenia cordifolia	ice plant (Aptenia)	L	L	L	L	/	/	
									T		Arbutus andrachne	Greek strawberry tree	L	L	L	L	?	?	
						S		T			Arbutus unedo	strawberry tree	L	L	L	L	M	M	
						S				N	Arctostaphylos 'Austin Griffiths'	Austin Griffiths manzanita	L	L	L	L	/	/	
						S				N	Arctostaphylos 'John Dourley'	John Dourley manzanita	L	L	L	L	/	/	
						S				N	Arctostaphylos 'Lester Rowntree'	Lester Rountree manzanita	L	L	L	L	/	/	
			Gc			S				N	Arctostaphylos 'Pacific Mist'	Pacific Mist manzanita	L	M	L	L	/	/	
						S				N	Arctostaphylos 'Sunset'	Sunset manzanita	L	L	L	L	/	/	
						S				N	Arctostaphylos bakeri 'Louis Edmunds'	Louis Edmunds manzanita	L	L	L	L	/	/	
						S				N	Arctostaphylos catalinae	Catalina manzanita	?	?	VL	VL	/	/	
						S				N	Arctostaphylos densiflora cvs.	manzanita cvs. e.g. Howard	L	L	L	L	/	/	
			Gc			S				N	Arctostaphylos edmundsii 'Big Sur'	Big Sur manzanita	L	M	L	L	/	/	
			Gc			S				N	Arctostaphylos edmundsii cvs	manzanita Carmel Sur etc.	M	M	L	L	/	/	
						S				N	Arctostaphylos glandulosa	Eastwood's manzanita	VL	?	VL	L	/	/	
						S		T		N	Arctostaphylos glauca	big berry manzanita	VL	/	VL	VL	/	/	
			Gc			S				N	Arctostaphylos hookeri 'Buxifolia'	Buxifolia manzanita	L	M	L	L	/	/	
			Gc			S				N	Arctostaphylos hookeri 'Ken Taylor'	Ken Taylor manzanita	L	?	L	L	/	/	
			Gc			S				N	Arctostaphylos hookeri 'Monterey Carpet'	Monterey carpet manzanita	L	?	L	L	/	/	
			Gc			S				N	Arctostaphylos hookeri 'Wayside'	Wayside manzanita	L	L	L	L	/	/	
						S				N	Arctostaphylos hookeri (shrub cvs.)	manzanita (shrub cvs.)	L	L	L	L	/	/	
						S				N	Arctostaphylos insularis	island manzanita	L	?	VL	L	/	/	
						S		T		N	Arctostaphylos manzanita	common manzanita	VL	VL	L	L	/	/	
						S		T		N	Arctostaphylos manzanita cvs.	manzanita cvs. e.g. Dr Hurd	L	VL	L	L	/	/	
						S				N	Arctostaphylos morroensis	Morro manzanita	L	?	L	L	/	/	
						S				N	Arctostaphylos otayensis	Otay manzanita	?	?	VL	VL	/	/	
						S				N	Arctostaphylos pajaroensis cvs.	Pajaro manzanita	M	L	L	L	/	/	
						S				N	Arctostaphylos pungens	Mexican manzanita	?	?	VL	VL	/	/	
						S				N	Arctostaphylos refugioensis	Refugio manzanita	L	?	VL	L	/	/	
						S				N	Arctostaphylos rudis cvs.	shagbark manzanita	L	L	VL	L	/	/	
						S				N	Arctostaphylos silvicola	ghostly manzanita	L	?	L	L	/	/	
						S				N	Arctostaphylos viridissima 'White Cloud'	White Cloud manzanita	L	?	L	L	/	/	
				P							Arctotis hybrids	African daisy	L	M	L	L	/	?	
				P						N	Argemone corymbosa	prickly poppy	VL	L	VL	L	L	L	
				P						N	Argemone munita	prickly poppy	VL	L	VL	L	?	?	
		G								N	Aristida purpurea	purple three-awn	L	VL	VL	L	L	?	
										N	Aristolochia californica (SHADE)	California Dutchman's pipe	L	L	M	L	/	/	
						S					Artemisia 'Powis Castle'	Powis Castle sagebrush	L	M	M	L	M	M	
						S					Artemisia arborescens	large wormwood	L	?	L	L	M	M	
						S				N	Artemisia californica	California sagebrush	L	L	VL	VL	?	?	
			Gc							N	Artemisia californica 'Canyon Gray'	Canyon Gray sagebrush	L	L	L	VL	?	?	
			Gc							N	Artemisia californica 'Montara'	Montara sagebrush	L	L	L	VL	?	?	
				P						N	Artemisia douglasiana	California mugwort	L	L	M	L	?	?	
			Gc	P							Artemisia spp. (herbaceous)	angel's hair	L	L	L	L	M	M	
			Gc			S					Artemisia spp. (shrubby)	sagebrush	VL	L	L	L	L	L	
						S				N	Artemisia tridentata	big sagebrush	VL	VL	VL	VL	L	/	
				P							Arum italicum	Italian arum	VL	VL	VL	VL	?	?	
									V		Asarina antirrhiniflora	snapdragon vine	M	?	M	L	/	M	
				P						N	Asclepias (CA native species)	milk/silk weed	L	L	VL	L	L	L	
				P							Asclepias curassavica	scarlet milkweed	M	M	L	L	?	L	
				P						N	Asclepias subulata	desert milkweed	/	L	VL	L	L	L	
			Gc			S				N	Atriplex CA native species	saltbush	VL	VL	VL	VL	L	VL	
			Gc			S				N	Atriplex semibaccata	Australian saltbush	VL	VL	VL	VL	L	VL	
		Bu									Babiana spp. and hybrids	baboon flower	L	/	VL	VL	/	/	
						S				N	Baccharis 'Centennial'	Centennial baccharis	VL	L	VL	L	L	L	
			Gc			S				N	Baccharis 'Starn'	Starn coyote brush	?	?	VL	L	L	L	
						S				N	Baccharis pilularis consanguinea	coyote brush	L	L	L	L	/	/	
			Gc			S				N	Baccharis pilularis cvs.	dwarf coyote brush	L	L	L	L	M	M	
						S				N	Baccharis sarothroides	desert broom	VL	L	VL	L	L	L	
				P						N	Baileya multiradiata	desert marigold	L	?	VL	L	L	L	

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Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S					Bauhinia lunarioides	Texas plume	/	?	L	L	?	M	
						S					Beaucarnea guatemalensis (Nolina guatemalensis)	red ponytail palm	?	/	M	L	?	?	
						S		T			Beaucarnea recurvata (Nolina recurvata)	ponytail palm	L	/	L	L	?	M	
						S					Beaucarnea stricta (Nolina stricta)	bottle palm	L	/	L	L	?	?	
						S				N	Bebbia juncea	sweet bush	?	?	VL	L	?	?	
			Gc			S				N	Berberis aquifolium 'Compacta' (partial shade i	compact Oregon grape holly	M	L	L	L	M	H	
			Gc			S				N	Berberis aquifolium var. repens (shade)	creeping mahonia	L	L	L	L	M	/	
						S				N	Berberis haematocarpa (Mahonia haematocarpa)	red barberry	?	?	VL	L	?	?	
						S				N	Berberis nevinii	Nevin mahonia	L	L	VL	L	M	M	
						S					Berberis trifoliata (Mahonia trifoliata)	currant of Texas	?	?	?	L	?	?	
	Bu									N	Bloomeria crocea	golden stars	VL	VL	VL	VL	?	?	
		G								N	Bothriochloa barbinodis	cane bluestem	L	L	L	L	?	?	
			Gc			S			V		Bougainvillea spp.	bougainvillea	L	L	L	L	/	M	
		G								N	Bouteloua curtipendula	sideoats grama	VL	L	VL	L	L	L	
		G								N	Bouteloua gracilis and cvs.	blue grama	L	L	L	L	L	L	
								T			Brachychiton populneus	bottle tree	L	L	L	L	M	M	
								T			Brachychiton rupestris	Queensland bottle tree	/	/	L	L	/	M	
					Pm			T			Brahea armata	blue hesper palm	L	L	L	L	M	M	
					Pm			T			Brahea brandegeei	San Jose hesper palm	L	?	M	L	?	?	
					Pm			T		N	Brahea edulis	Guadalupe palm	L	L	L	L	M	M	
						S				N	Brickellia californica	brickellbush	L	M	VL	L	?	?	
	G										Briza media	quaking grass	L	L	L	L	?	?	
	Bu									N	Brodiaea spp.	brodiaea	VL	VL	VL	L	/	/	
						S					Buddleja marrubiifolia	woolly butterfly bush	?	L	?	L	L	L	
				P							Bulbine frutescens	stalked bulbine	L	L	L	L	L	L	
				P							Bulbine latifolia	rooiwortel	L	?	L	L	?	?	
	Bu										Bulbinella elegans	cat's tail lily	L	?	L	L	?	?	
	Bu										Bulbinella floribunda	yellow cat tail	L	L	L	L	?	?	
	Bu										Bulbinella hookeri	Maori onion	L	?	M	L	?	?	
	Bu										Bulbinella nutans	bulbinella	L	?	L	L	?	?	
	Bu										Bulbinella robusta	bulbinella	L	L	L	L	?	?	
						S					Bupleurum fruticosum	shrubby hare's ear	L	L	L	L	?	?	
					Pm			T			Butia odorata (B. capitata)	pindo palm	L	L	L	L	M	M	
						S					Caesalpinia gilliesii	desert bird of paradise	L	L	L	L	L	L	
						S					Caesalpinia mexicana	Mexican bird of paradise	?	/	L	L	L	L	
				P						N	Calandrinia spp. and cvs. (some spp. changed	rock purslane	L	L	L	L	?	?	
				P							Calibanus hookeri	calibanus	/	/	VL	VL	?	?	
						S					Calliandra 'Sierra Star'	fairy duster hybrid	?	?	?	L	L	L	
						S				N	Calliandra californica	Baja fairy duster	/	/	VL	L	L	L	
						S				N	Calliandra eriophylla	fairy duster	/	/	VL	VL	L	L	
						S					Calliandra peninsularis	Baja fairy duster	?	/	?	L	?	L	
						S					Calliandra surinamensis	Surinam flame bush	?	/	M	L	?	?	
						S					Calliandra tweedii	Trinidad flame bush	/	M	L	L	/	/	
				P							Callirhoe involucrata	wine cups	L	?	VL	L	?	?	
						S					Callistemon 'Cane's hybrid'	Cane's hybrid bottlebrush	L	?	L	L	?	?	
						S					Callistemon 'Jeffers'	Jeffer's bottlebrush	L	L	L	L	?	?	
						S					Callistemon 'Little John'	Little John bottlebrush	L	L	L	L	M	M	
						S					Callistemon 'Violaceus'	purple bottle brush	L	L	L	L	?	?	
						S		T			Callistemon citrinus	bottle brush	L	L	L	L	/	M	
						S		T			Callistemon pinifolius	pine-leaved bottlebrush	L	L	L	L	?	?	
						S					Callistemon rigidus	erect bottlebrush	L	?	?	L	?	?	
	Bu									N	Calochortus spp.	Mariposa lily	L	L	VL	VL	VL	VL	
				P							Calylophus berlandieri	sundrops	L	L	VL	L	?	?	
				P							Calylophus drummondiana	Texas primrose	L	L	VL	L	M	M	
				P							Calylophus hartwegii	Sierra sundrop	L	L	VL	L	M	M	
						S					Capparis spinosa	caper bush	VL	/	L	L	?	?	
				P							Carex divulsa (sold as C. tumulicola)	European gray sedge	L	L	L	L	M	M	
				P						N	Carex spissa	San Diego sedge	M	L	M	L	?	?	
				P						N	Carex tumulicola	Berkeley sedge	L	L	L	L	M	M	
						S				N	Carnegiea gigantea	saguaro	/	/	VL	L	/	L	
			Gc								Carpobrotus spp.	ice plant (Carpobrotus)	L	M	VL	L	L	L	
								T			Casuarina cunninghamiana	river she-oak	L	L	L	L	M	M	
						S				N	Ceanothus 'Blue Jeans'	Blue Jeans ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus 'Concha'	Concha ceanothus	L	L	L	L	/	/	

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Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S				N	Ceanothus 'Cynthia Postan'	Cynthia Postan ceanothus	?	?	L	L	/	/	
						S				N	Ceanothus 'Dark Star'	Dark Star ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus 'Frosty Blue'	Frosty Blue ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus 'Julia Phelps'	Julia Phelps ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus 'Louis Edmonds'	Louis Edmonds ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus 'Ray Hartman'	Ray Hartman ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus 'Sierra Blue'	Sierra blue ceanothus	L	?	VL	L	/	/	
						S				N	Ceanothus 'Tassajara Blue'	Tassajara Blue ceanothus	L	?	L	L	/	/	
						S				N	Ceanothus 'Wheeler Canyon'	Wheeler Canyon ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus cuneatus	buckbrush	VL	VL	VL	L	/	/	
						S				N	Ceanothus cyaneus	San Diego ceanothus	L	?	VL	VL	/	/	
						S				N	Ceanothus greggii	desert ceanothus	VL	?	VL	L	/	/	
						S				N	Ceanothus impressus 'Puget Blue'	Puget Blue ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus leucodermis	white bark CA lilac	VL	L	VL	VL	/	/	
			Gc							N	Ceanothus maritimus 'Frosty Dawn'	Frosty Dawn ceanothus	L	L	L	L	/	/	
			Gc							N	Ceanothus maritimus 'Popcorn'	Popcorn CA lilac	L	?	L	L	/	/	
			Gc							N	Ceanothus maritimus 'Pt. Sierra'	Pt Sierra ceanothus	L	L	L	L	/	/	
			Gc							N	Ceanothus maritimus 'Valley Violet'	Valley Violet ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus megacarpus	big pod ceanothus	VL	L	VL	VL	/	/	
						S				N	Ceanothus rigidus 'Snowball'	Snowball ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus spinosus	green bark ceanothus	?	L	VL	VL	/	/	
						S				N	Ceanothus thyrsiflorus 'Arroyo de la Cruz'	Arroyo de la Cruz ceanothu	L	?	L	L	/	/	
						S				N	Ceanothus thyrsiflorus 'Snow Flurry'	Snow Flurry ceanothus	L	L	L	L	/	/	
						S				N	Ceanothus tomentosus var. olivaceus	woolly leaf ceanothus	?	?	VL	VL	/	/	
						S				N	Ceanothus verrucosus	warty stem ceanothus	?	?	VL	VL	/	/	
								T			Ceiba insignis (Chorisia insignis)	white floss silk tree	M	/	L	L	/	M	
								T			Ceiba speciosa (Chorisia speciosa)	floss silk tree	L	/	L	L	/	M	
								T		N	Celtis reticulata	western hackberry	L	L	L	VL	L	L	
				P							Centranthus ruber	red valerian	VL	VL	L	L	M	M	
						S					Cephalocereus spp.	old man cactus	VL	/	VL	L	L	L	
			Gc								Cephalophyllum spp.	ice plant (Cephalophyllum)	L	L	L	L	?	?	
								T			Ceratonia siliqua	carob	L	L	L	L	/	L	
								T		N	Cercis occidentalis	western redbud	VL	VL	L	L	M	M	
						S				N	Cercocarpus betuloides	mountain ironwood	VL	VL	VL	VL	VL	/	
						S				N	Cercocarpus ledifolius	curl-leaf mountain mahogar	VL	?	/	L	/	/	
						S				N	Cercocarpus minutiflorus	San Diego mountain mahog	L	?	VL	VL	/	/	
						S	Su				Cereus hildmannianus	night blooming cereus	VL	?	?	VL	/	L	
						S	Su				Cereus peruvianus	Peruvian apple cactus	VL	?	VL	L	/	L	
			Gc							N	Chamaebatia australis	southern mountain misery	?	/	?	L	?	?	
					Pm	S					Chamaerops humilis	Mediterranean fan palm	L	L	L	L	M	M	
						S					Chamelaucium uncinatum	Geraldton wax flower	L	L	L	L	/	M	
Bu											Chasmanthe aethiopica	cobra lily	L	?	L	VL	?	?	
								T		N	Chilopsis linearis	desert willow	VL	VL	VL	L	M	M	
								T			Chiranthodendron pentadactylon	monkey's hand tree	L	L	L	L	?	?	
Bu										N	Chlorogalum pomeridianum	soap plant	VL	VL	VL	VL	?	?	
						S					Chrysactinia mexicana	damianita daisy	?	?	VL	L	L	L	
		G									Chrysopogon zizanioides (Vetiveria zizanioides)	vetiver	M	M	M	L	?	?	
						S				N	Chrysothamnus nauseosus	rabbit brush	/	/	VL	L	VL	L	
				P						N	Cirsium occidentale	venus thistle	VL	L	VL	L	?	?	
						S					Cistus incanus ssp. creticus (C.villosus)	pink rockrose	L	?	L	VL	?	M	
			Gc			S					Cistus spp. and cvs.	rockrose	L	L	L	L	M	M	
								V		N	Clematis lasiantha	pipestem clematis	L	L	VL	L	/	/	
								V		N	Clematis ligusticifolia	western virgin's bower	M	M	L	L	/	/	
								V		N	Clematis pauciflora	small flowered clematis	?	?	VL	L	?	?	
						S				N	Cleome isomeris	bladder pod	VL	VL	VL	VL	L	L	
								P		N	Clinopodium chandleri (Satureja chandleri)	San Miguel savory	L	?	L	L	?	?	
								P		N	Clinopodium douglasii (Satureja douglasii)	yerba buena	L	M	M	L	?	?	
						S				N	Cneoridium dumosum	bushrue	?	L	VL	L	L	L	
						S				N	Coleogyne ramosissima	blackbrush	?	?	/	VL	VL	?	
						S					Colletia paradoxa	anchor plant	L	?	L	L	?	/	
						S		T		N	Comarostaphylis diversifolia (Arctostaphylos di	summer holly	VL	L	VL	L	/	L	
								P			Commelina coelestis	dayflower	M	?	?	L	?	?	
						S				N	Condalia globosa	bitter snakewood	?	?	?	L	?	?	
						S				N	Condea emoryi (Hyptis emoryi)	desert lavender	/	?	VL	VL	L	L	

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Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S					<i>Convolvulus cneorum</i>	bush morning glory	L	L	L	L	L	L	
			Gc								<i>Convolvulus mauritanicus</i>	ground morning glory	L	L	L	L	M	M	
								T			<i>Cordia boissieri</i>	Texas olive	?	?	L	L	L	L	
						S		T			<i>Cordia parvifolia</i>	little leaf cordia	?	?	L	L	L	L	
				P							<i>Coreopsis auriculata</i> 'Nana'	dwarf coreopsis	L	L	L	L	M	M	
				P							<i>Coreopsis lanceolata</i>	lanceleaf tickseed	L	L	L	L	M	M	
				P							<i>Coreopsis verticillata</i> cvs.	threadleaf coreopsis	L	L	L	L	M	M	
						S					<i>Correa</i> spp. & cvs.	Australian fuchsia	L	L	L	L	/	?	
								T			<i>Corymbia papuana</i> (<i>Eucalyptus papuana</i>)	ghost gum	/	?	L	L	?	?	
						S		T			<i>Cotinus coggygia</i>	smoke tree	L	L	L	L	L	/	
				P		S					<i>Cotyledon</i> spp.	cotyledon	L	L	L	L	/	?	
				P		S	Su				<i>Crassula</i> spp.	crassula	L	L	L	L	/	?	
				P						N	<i>Crocantemum aldersonii</i> (<i>Helianthemum scop</i>	sunrose	L	?	VL	L	?	?	
				P							<i>Crocsmia hybrids</i> (<i>Tritonia</i>)	montbrieta	L	L	L	L	/	?	
						S				N	<i>Crossosoma bigelovii</i>	ragged rock flower	?	?	/	L	?	?	
								T			<i>Cupressus sempervirens</i>	Italian cypress	L	M	L	L	M	M	
Bu											<i>Cyclamen graecum</i> (shade)	Greek cyclamen	L	?	?	L	?	?	
Bu											<i>Cyclamen hederifolium</i> (shade)	ivy leaf cyclamen	VL	L	L	L	?	?	
Bu											<i>Cyclamen persicum</i> and hybrids (shade)	Persian cyclamen	L	M	M	L	/	/	
						S		T			<i>Cydonia oblonga</i>	Quince	L	L	M	L	?	?	
				P							<i>Cyphostemma juttae</i>	tree grape	/	?	VL	L	?	?	
Bu											<i>Cyrtanthus hybrids</i>	hybrid cyrtanthus	M	?	L	L	?	?	
								T			<i>Dalbergia sissoo</i>	indian rosewood	/	?	L	L	/	L	
						S					<i>Dalea bicolor</i>	dalea (bicolor)	/	/	L	L	L	L	
			Gc								<i>Dalea capitata</i>	dalea (capitata)	/	/	VL	L	M	M	
			Gc								<i>Dalea greggii</i>	trailing indigo bush	?	/	L	L	L	L	
			Gc								<i>Dalea orcuttii</i> (now <i>Marina orcuttii</i>)	Baja indigo bush	/	/	L	L	/	L	
						S	Su				<i>Dasyliiron</i> spp.	desert spoon	VL	VL	VL	L	L	L	
			Gc								<i>Delosperma</i> spp.	ice plant (<i>Delosperma</i>)	L	L	L	L	/	L	
						S				N	<i>Dendromecon harfordii</i>	island bush poppy	L	VL	VL	L	?	?	
						S				N	<i>Dendromecon rigida</i>	tree poppy	VL	VL	VL	VL	?	?	
						S					<i>Dermatobotrys saundersii</i>	tree jockey	M	?	L	L	?	?	
				P							<i>Dianella revoluta</i> cvs.	flax lily	M	L	L	L	?	?	
Bu										N	<i>Dichelostemma</i> spp.	blue dicks	VL	VL	VL	VL	?	?	
				P							<i>Dicliptera suberecta</i>	hummingbird plant	L	L	L	L	?	?	
		G								N	<i>Distichlis spicata</i> (marsh, reveg)	salt grass	L	VL	L	L	?	?	
				P							<i>Dodecatheon</i> spp. (non-native)	shooting stars	L	L	VL	VL	?	?	
						S					<i>Doryanthes palmeri</i>	spear lily	L	/	L	L	/	/	
								T			<i>Dracaena draco</i>	dragon tree	L	/	VL	L	/	/	
				P							<i>Dracunculus vulgaris</i>	voodoo lily	L	VL	L	L	?	?	
			Gc								<i>Drosanthemum</i> spp.	ice plant (<i>Drosanthemum</i>)	L	L	L	L	/	/	
				P						N	<i>Drymocallis glandulosa</i> (<i>Potentilla glandulosa</i>)	sticky cinquefoil	L	?	L	L	?	?	
				P						N	<i>Dryopteris arguta</i>	coastal wood fern	M	?	L	L	?	?	
				P			Su			N	<i>Dudleya</i> spp.	dudleya, live forever	L	VL	VL	L	?	?	
				P							<i>Dyckia</i> spp.	dyckia	L	?	L	L	?	L	
			Gc	P							<i>Dymondia margaretae</i>	dymondia	L	L	L	L	/	/	
								T			<i>Ebenopsis ebano</i> (<i>Pithecellobium flexicaule</i>)	Texas ebony	/	?	L	L	?	L	
				P		S	Su				<i>Echeveria</i> spp.	hens and chickens	L	L	L	L	/	?	
						S	Su			N	<i>Echinocactus</i> spp. (CA native and non-native)	barrel cactus	VL	VL	VL	L	/	L	
				P			Su				<i>Echinopsis</i> spp. (<i>Trichocereus</i> spp.)	torch cactus	L	L	L	L	L	L	
				P							<i>Echium</i> 'Purple Tower'	purple tower echium	L	L	L	L	?	?	
				P							<i>Echium amoenum</i>	red feathers	?	?	?	L	?	?	
				P		S					<i>Echium candicans</i> (<i>fastuosum</i>)	pride of Madeira	L	L	L	L	/	/	
						S					<i>Echium gentianoides</i>	Tajinaste	L	?	L	VL	/	/	
						S		T			<i>Elaeagnus angustifolia</i>	Russian olive	VL	L	L	L	M	M	
						S					<i>Elaeagnus pungens</i>	silverberry	L	L	L	L	M	M	
		G								N	<i>Elymus cinereus</i> (<i>Leymus cinereus</i>)	basin wild rye	?	?	L	L	?	?	
		G								N	<i>Elymus condensatus</i> and cvs. (<i>Leymus conder</i>	giant wild rye	L	L	L	L	?	?	
		G								N	<i>Elymus triticoides</i> (<i>Leymus triticoides</i>)	creeping wild rye	L	L	L	L	?	?	
						S					<i>Encelia actoni</i>	mountain bush sunflower	?	?	VL	L	?	?	
						S				N	<i>Encelia californica</i>	coast sunflower	L	/	VL	L	/	VL	
						S				N	<i>Encelia farinosa</i>	brittle bush	L	/	VL	VL	VL	VL	
						S				N	<i>Encelia frutescens</i>	green brittlebush	?	?	VL	L	?	?	
						S				N	<i>Ephedra nevadensis</i>	Nevada ephedra	VL	?	VL	VL	VL	VL	

Appendix A WUCOLS

Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S				N	Ephedra viridis	green mormon tea	L	L	VL	VL	VL	?	
				P						N	Epilobium spp.(Zauschneria) and cvs.	California fuchsia	L	L	VL	L	M	M	
		G									Eragrostis chloromelas	blue love grass	?	?	L	L	?	?	
		G									Eragrostis elliottii 'Tallahassee Sunset'	Elliott's lovegrass	?	L	L	L	?	?	
		G									Eragrostis spectabilis	purple love grass	?	L	?	L	?	?	
						S					Eremophila glabra	emu bush	L	L	L	L	/	L	
						S					Eremophila maculata	spotted emu bush	L	L	L	L	L	L	
						S					Eremophila racemosa	Easter egg bush	L	?	L	L	L	L	
				P						N	Eriastrum densifolium elongatum	giant woolly star	VL	?	VL	VL	?	?	
						S				N	Ericameria arborescens	golden fleece	VL	?	VL	L	?	?	
						S				N	Ericameria cuneata	compact goldenbush	L	?	VL	L	?	?	
						S				N	Ericameria ericoides	California goldenbush	L	M	L	L	?	?	
						S				N	Ericameria laricifolia	turpentine bush	?	/	VL	L	L	L	
						S				N	Ericameria linearifolia	interior golden bush	L	?	VL	L	?	?	
				P						N	Erigeron 'Wayne Roderick'	Wayne Roderick daisy	M	M	L	L	/	/	
						S				N	Eriodictyon crassifolium	thickleaf yerba santa	L	VL	VL	VL	?	?	
						S				N	Eriodictyon tomentosum	woolly yerba santa	L	VL	VL	VL	VL	?	
						S				N	Eriodictyon trichocalyx	smooth leaf yerba santa	?	?	VL	VL	?	?	
						S				N	Eriogonum arborescens	Santa Cruz island buckwhe	VL	L	VL	VL	?	?	
						S				N	Eriogonum cinereum	ashy-leaf buckwheat	?	L	VL	VL	?	?	
				P						N	Eriogonum crocatum	saffron buckwheat	L	L	VL	L	?	?	
										N	Eriogonum elongatum	wand buckwheat			VL	VL			
		Gc								N	Eriogonum fasciculatum 'Bruce Dickinson'	Bruce Dickenson buckwhea	?	L	VL	VL	?	?	
		Gc								N	Eriogonum fasciculatum 'Dana Point'	Dana Point buckwheat	?	L	VL	VL	?	?	
		Gc								N	Eriogonum fasciculatum 'Theodore Payne'	Theodore Payne buckwhea	L	L	VL	VL	?	?	
		Gc								N	Eriogonum fasciculatum 'Warriner Lytle'	Warriner Lytle buckwheat	L	L	VL	VL	?	?	
						S				N	Eriogonum fasciculatum and cvs. (not listed ab	California buckwheat	VL	VL	VL	VL	VL	VL	
						S				N	Eriogonum giganteum	St. Catherine's lace	VL	VL	VL	VL	?	?	
				P						N	Eriogonum grande rubescens	San Miguel Island buckwhe	L	L	VL	L	?	?	
						S				N	Eriogonum latifolium	coast buckwheat	L	L	L	L	?	?	
						S				N	Eriogonum parvifolium	cliff buckwheat	L	M	VL	L	?	?	
				P		S				N	Eriogonum spp. (CA native and non-native spp	buckwheat	L	L	VL	L	L	L	
						S				N	Eriogonum umbellatum and cvs.	sulphur-flower buckwheat	L	M	L	L	?	?	
				P						N	Eriophyllum confertiflorum	golden yarrow	L	L	VL	VL	?	?	
				P						N	Eriophyllum lanatum & cvs	woolly sunflower	L	L	L	L	?	?	
				P							Eryngium maritimum	sea holly	M	M	L	L	?	?	
				P							Eryngium pandanifolium	giant sea holly	M	?	M	L	?	?	
				P						N	Erysimum concinnum	wallflower	L	L	L	L	?	?	
				P						N	Erysimum menziesii	Pt.Reyes wallflower	L	L	L	L	?	?	
						S		T			Erythrina crista-galli	cockspur coral tree	M	M	L	L	/	M	
								T			Erythrina x sykesii	Sykes coral tree	/	/	L	L	/	/	
				P						N	Eschscholzia californica (annual in the desert)	California poppy	VL	VL	VL	VL	/	/	
						S					Espostoa lanata	Peruvian old man cactus	?	?	VL	L	L	L	
								T			Eucalyptus camaldulensis	red gum	L	L	L	L	M	M	
								T			Eucalyptus cladocalyx	sugar gum	L	/	L	L	/	/	
								T			Eucalyptus conferruminata (lehmannii)	bushy yate	L	L	L	L	/	/	
								T			Eucalyptus gunnii	cider gum	L	L	L	L	?	?	
								T			Eucalyptus leucoxylon	white ironbark	L	L	L	L	/	M	
								T			Eucalyptus loxophleba	York gum	?	VL	?	VL	/	/	
								T			Eucalyptus macrandra	long flowered marlock	VL	VL	VL	L	/	L	
								T			Eucalyptus microtheca	coolibah	L	L	L	L	M	M	
								T			Eucalyptus polyanthemos	silver dollar gum	L	L	L	L	M	M	
								T			Eucalyptus robusta	swamp mahogany	L	L	L	L	/	/	
								T			Eucalyptus rudis	flooded gum	L	L	L	L	M	M	
								T			Eucalyptus sargentii	Salt River mallet	L	?	?	L	/	L	
								T			Eucalyptus sideroxylon	red iron bark	L	L	L	L	M	M	
								T			Eucalyptus spathulata	swamp mallee	L	/	L	L	/	M	
				P		Su					Euphorbia antisiphilitica	candelilla	?	?	L	L	L	L	
				P		Su					Euphorbia caput-medusae	Medusa's head	VL	?	VL	L	?	?	
				P		Su					Euphorbia characias	Mediterranean spurge	L	L	VL	L	?	?	
						Su		T			Euphorbia ingens	candelabra tree	/	/	L	L	?	L	
						S	Su				Euphorbia lambii	tree euphorbia	/	?	L	L	?	?	
						S	Su				Euphorbia mauritanica	pencil milk bush	/	?	?	L	?	?	
						S	Su				Euphorbia milii	crown of thorns	/	L	L	L	/	L	

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Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S	Su			N	Euphorbia misera	cliff spurge	?	?	VL	L	?	?	
				P			Su				Euphorbia myrsinites	creeping spurge	L	L	L	L	?	?	
				P			Su				Euphorbia rigida	gopher spurge	L	L	L	L	/	L	
						S	Su				Euphorbia xanti	Baja spurge	VL	?	VL	L	?	?	
				P						N	Euthamia occidentalis	western goldenrod	?	VL	L	L	?	?	
								V			Fallopia baldschuanica (Polygonum aubertii)	fleeceflower	L	L	L	L	M	M	
						S				N	Fallugia paradoxa	Apache plume	L	M	VL	VL	L	L	
						S	Su			N	Ferocactus spp. (CA native and non-native spp)	barrel cactus	VL	VL	VL	L	L	L	
Bu											Ferraria crispa	starfish iris	VL	?	L	VL	?	?	
Bu											Ferraria schaeferi 'Dark Chocolate'	Dark Chocolate ferraria	?	?	L	VL	?	?	
		G									Festuca 'Siskiyou Blue'	Siskiyou Blue fescue	M	M	L	L	M	M	
						S				N	Forestiera pubescens	desert olive	L	L	L	L	L	L	
						S	Su				Fouquieria columnaris	boojum	/	/	VL	VL	/	VL	
						S	Su				Fouquieria macdougalii	Mexican tree ocotillo	/	/	VL	VL	L	L	
						S	Su			N	Fouquieria splendens	ocotillo	/	/	VL	VL	VL	VL	
						S				N	Frangula californica and cvs. (Rhamnus califor	coffeeberry	L	L	VL	L	/	?	
						S				N	Frangula californica ssp.tomentella (Rhamnus	chaparral coffeeberry	VL	VL	VL	L	/	?	
						S				N	Frankenia palmeri	Palmer's Frankenia	?	VL	VL	VL	?	?	
						S				N	Frankenia salina	alkali heath	?	VL	VL	VL	?	?	
								T		N	Fraxinus dipetala	foothill ash	L	?	L	L	?	?	
Bu											Freesia spp.	freesia	VL	M	L	VL	L	M	
						S				N	Fremontodendron spp. & cvs.	flannel bush	VL	VL	VL	VL	/	/	
						S					Furcraea spp.	furcraea	L	/	L	L	/	L	
						S				N	Galvezia juncea & cvs.	Baja bush-snapdragon	/	/	VL	L	?	?	
						S				N	Gambelia speciosa & cvs. (Galvesia speciosa	island bush snapdragon	L	L	VL	L	?	?	
						S				N	Garrya flavescens	ashy silktassel	L	?	VL	L	/	/	
						S				N	Garrya veatchii	silk tassel bush	?	?	VL	VL	?	?	
				P			Su				Gasteraloe hybrids	gasteraloe	L	?	L	L	?	?	
				P			Su				Gasteria spp. (shade)	gasteria	L	L	L	L	?	?	
Bu											Gladiolus watsonius (Homoglossum)	gladiolus	L	L	L	L	/	/	
				P							Glandularia aristigera and cvs (Verbena tenuis	South American rock verva	L	M	L	L	M	M	
				P						N	Glandularia lilacina and cvs. (Verbena lilacina)	lilac verbena	L	L	L	L	?	?	
				P							Glaucium flavum	horned poppy	L	L	VL	L	?	?	
								T			Gleditsia triacanthos	honey locust	L	L	M	L	L	L	
				P							Globularia x indubia	globe daisy	M	?	L	L	/	/	
				P							Goniolimon tataricum (Limonium tataricum)	Tartarian statice	L	?	M	L	?	?	
				P			Su				Graptopetalum spp.	graptopetalum	VL	L	L	L	/	?	
				P			Su				Graptoveria hybrids	graptoveria	L	L	L	L	?	?	
								T			Grevillea robusta	silk oak	L	L	L	L	/	M	
						S					Grevillea spp. & cvs.	grevillea	L	L	L	L	/	M	
				P						N	Grindelia camporum	great valley gum plant	?	L	VL	L	?	?	
				P						N	Grindelia hirsutula	hairy gum plant	L	L	VL	L	?	?	
				P						N	Grindelia stricta	coastal gum plant	L	M	VL	L	?	?	
		Gc								N	Grindelia stricta var. platyphylla	spreading gum plant	L	M	L	L	?	?	
						S				N	Gutierrezia sarothrae	matchweed	?	?	VL	L	VL	L	
Bu											Haemanthus albiflos	dappled snowbush	L	?	L	L	?	?	
						S					Hakea laurina	sea urchin tree	L	L	L	L	/	/	
						S					Hakea suaveolens	sweet hakea	L	L	L	L	/	/	
						S					Hamelia patens	Texas firecracker bush	/	?	L	L	M	M	
								T			Havardia mexicana (Pithecellobium mexicana)	Mexican ebony	?	?	L	L	/	L	
								T			Havardia pallens (Pithecellobium pallens)	tenaza	?	?	?	L	L	L	
				P			Su				Haworthia spp.	haworthia	L	L	L	L	/	L	
						S				N	Hazardia detonsa	island bristleweed	?	L	VL	L	?	?	
				P			Su				Hechtia spp and cvs.	hechtia	L	?	L	L	?	?	
				P							Helianthemum nummularium & cvs.	common sunrose	L	M	L	L	?	?	
				P						N	Helianthemum scoparium var. aldersonii (See	sunrose	L	?	VL	L	?	?	
				P							Helichrysum amorginum	ruby cluster straw flower	?	?	L	L	/	/	
				P							Helleborus argutifolius	Corsican hellebore	L	L	L	L	?	?	
				P							Helleborus foetidus	stinking hellebore	L	M	M	L	/	/	
				P							Helleborus lividus	Majorcan hellebore	L	?	L	L	/	/	
						S					Hermannia verticillata	honeybells	M	?	L	L	?	?	
						S	Su				Hesperaloe campanulata	bell flower hesperaloe	?	?	VL	L	L	L	
						S	Su				Hesperaloe changii	hesperaloe (changii)	?	?	VL	VL	?	?	
						S	Su				Hesperaloe funifera	Coahuilan hesperaloe	L	L	VL	L	L	L	

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Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S	Su				Hesperaloe nocturna	seven-son flower	?	?	VL	L	L	?	
						S	Su				Hesperaloe parviflora	red/ yellow yucca	L	L	VL	L	L	L	
						S	Su				Hesperaloe tenuifolia	tropical hesperaloe	?	?	VL	L	?	?	
								T			Hesperocyparis arizonica (Cupressus arizonica)	Arizona cypress	VL	VL	VL	VL	L	/	
								T	N		Hesperocyparis forbesii (Cupressus forbesii)	Tecate cypress	L	L	VL	VL	/	/	
								T	N		Hesperocyparis guadalupensis (Cupressus montana)	Guadalupe Island cypress	L	L	VL	VL	/	/	
								T	N		Hesperocyparis montana (Cupressus montana)	San Pedro Martir cypress	?	?	VL	L	?	?	
								T	N		Hesperocyparis nevadensis (Cupressus nevadensis)	Piute cypress	L	?	L	L	?	?	
								T	N		Hesperocyparis sargentii (Cupressus sargentii)	Sargent cypress	L	L	L	L	?	?	
								T	N		Hesperocyparis stephensonii (Cupressus arizonica)	Cuyamaca cypress	VL	VL	VL	L	L	L	
						S	Su			N	Hesperoyucca spp. (Yucca whipplei, Yucca californica)	yucca	L	L	VL	L	L	L	
						S				N	Heteromeles arbutifolia	toyon	L	VL	VL	L	L	/	
				P						N	Heterotheca sessiliflora	sessile flower false golden aster	?	M	L	L	?	?	
				P						N	Heterotheca villosa (Chrysopsis villosa)	hairy golden aster	L	M	L	L	?	?	
				P						N	Heuchera elegans	urn flowered alum root	M	?	M	L	?	?	
				P						N	Heuchera hirsutissima	Idyllwild rock flower	M	M	M	L	?	?	
		G								N	Hilaria rigida (Pleuraphis rigida)	big galleta grass	?	?	VL	L	M	?	
				P						N	Hoita macrostachya (Psoralea macrostachya)	leather root	?	?	M	L	?	?	
						S					Homalocladium platycladum	ribbon bush	M	M	M	L	?	?	
	Bu										Homoglad hybrids	hybrid homoglad	VL	L	L	VL	?	?	
				P						N	Horkelia parryi	Parry's horkelia	?	M	M	L	?	?	
				P						N	Hosackia crassifolia var. otayensis (Lotus crassifolia)	Otay Mountain lotus	L	M	VL	L	?	?	
				P			Su				Hylotelephium spp. and cvs. (Some are Sedum)	stone crop	L	L	L	L	?	?	
						S					Hymenolepis parviflora (Athanasia acerosa)	golden coulter bush	L	?	?	L	?	?	
						S					Ilex vomitoria	yaupon	L	M	M	L	M	M	
	Bu										Ipheion uniflorum	spring star flower	L	L	L	L	?	?	
	Bu										Iris x hollandica	Dutch iris	M	M	?	VL	M	M	
	Bu										Iris xiphium	Spanish iris	M	M	?	VL	M	M	
						S				N	Isocoma spp. (Haplopappus)	goldenbush	?	?	VL	VL	VL	VL	
			Gc							N	Iva hayesiana	poverty weed	VL	VL	VL	L	/	/	
	Bu										Ixia spp.	African corn lily	L	L	L	VL	?	?	
								T		N	Juglans californica	California black walnut	M	/	L	L	/	/	
								T	N		Juglans hindsii	California black walnut	M	M	/	L	/	/	
				P						N	Juncus patens and cvs.	California grey rush	L	M	L	L	?	M	
						S				N	Juniperus californica	California juniper	L	L	VL	L	L	?	
						S				N	Justicia californica (Beloperone californica)	chuparosa	VL	/	VL	L	L	VL	
						S					Justicia spicigera	Mexican honeysuckle	/	L	L	L	L	L	
						S	Su				Kalanchoe spp.	kalanchoe	L	L	L	L	/	M	
						S				N	Keckiella antirrhinoides	yellow penstemon	L	L	L	L	/	/	
						S				N	Keckiella breviflora	yawning penstemon	L	L	VL	L	?	?	
						S				N	Keckiella cordifolia	climbing penstemon	L	L	VL	L	/	/	
				P			Su				Kleinia repens (Senecio repens)	blue chalksticks	L	?	L	L	?	?	
				P							Kniphofia galpinii	coral poker	L	?	L	L	?	?	
				P							Kniphofia uvaria hybrids and cvs.	red hot poker	L	L	L	L	M	M	
								T			Koelreuteria paniculata	golden rain tree	M	M	L	L	M	M	
						S				N	Krascheninnikovia lanata	winterfat	?	?	VL	L	L	?	
	Bu										Lachenalia spp.	cape cowslip	L	L	L	VL	?	?	
								T			Lagunaria patersonii	primrose tree	L	/	L	L	/	/	
			Gc								Lampranthus spp.	ice plant (Lampranthus)	L	L	VL	L	/	/	
			Gc								Lantana 'New Gold'	New Gold lantana	?	?	VL	L	M	M	
			Gc			S					Lantana camara & cvs.	lantana	L	M	L	L	M	M	
			Gc								Lantana hybrids	hybrid lantana	L	L	L	L	M	M	
			Gc			S					Lantana montevidensis (sellowiana)	trailing lantana	L	L	L	L	M	M	
						S				N	Larrea tridentata	creosote	VL	VL	VL	L	VL	VL	
								T			Laurus 'Saratoga'	Saratoga laurel	L	L	L	L	M	M	
								T			Laurus nobilis	sweet bay	L	L	L	L	M	M	
						S					Lavandula spp. & cvs.	lavender	L	L	L	L	M	/	
						S					Leonotis leonurus	lion's tail	L	L	L	L	M	?	
						S				N	Lepechinia calycina	pitcher sage	L	M	L	L	?	?	
						S				N	Lepechinia fragrans	fragrant pitcher sage	L	L	L	L	?	?	
						S		T			Leptospermum 'Dark Shadows'	Dark Shadows tea tree	L	?	L	L	/	/	
						S		T			Leptospermum laevigatum	Australian tea tree	L	L	L	L	/	/	
						S					Leptospermum laevigatum 'Revesii'	dwarf tea tree	L	?	L	L	/	/	
						S		T			Leptospermum petersonii	lemon scented tea tree	L	?	L	L	/	/	

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Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S					Leptospermum rotundifolium	tea tree	L	L	L	L	/	/	
				P						N	Leptosyne gigantea (Coreopsis gigantea)	giant coreopsis	L	VL	VL	L	/	/	
				P						N	Leptosyne maritima (Coreopsis maritima)	sea dahlia	L	L	VL	L	M	M	
Bu											Leucojum autumnale (shade)	autumn snowflake	L	L	L	L	?	?	
						S					Leucophyllum langmaniae 'Lynn's legacy'	Lynn's everblooming texas	?	M	?	L	L	L	
						S					Leucophyllum spp. & cvs.	purple sage, Texas ranger	L	L	L	L	L	L	
						S					Leucephyta brownii (Calocephalus brownii)	cushion bush	L	?	L	L	?	?	
Bu										N	Lilium humboldtii	Humboldt lily	L	VL	L	L	M	M	
Bu										N	Lilium pardalinum	leopard lily and Wiggins lily	M	VL	M	L	M	M	
				P							Limonium vulgare	sea lavender	?	L	L	L	/	/	
				P							Linum spp. (perennial)	flax	VL	VL	L	L	?	?	
						S					Lobelia laxiflora	Mexican lobelia	L	L	L	L	M	M	
				P						N	Lomatium californicum	California celery	L	/	VL	VL	?	?	
				P						N	Lomatium dasycarpum	lace parsnip	?	?	VL	VL	?	?	
								V		N	Lonicera hispidula	California honeysuckle	L	L	L	VL	?	?	
						S				N	Lonicera interrupta	chaparral honeysuckle	L	L	L	L	?	?	
		Gc						V		N	Lonicera japonica	Japanese honeysuckle	M	M	L	L	M	M	
								V	N	Lonicera subspicata	chaparral honeysuckle	L	?	L	L	?	?		
						S				N	Lupinus albifrons	silver lupine	VL	L	L	L	/	/	
						S				N	Lupinus chamissonis	silver dune lupine	L	?	L	L	/	/	
						S				N	Lupinus excubitus	grape soda lupine	VL	VL	L	L	/	/	
				P						N	Lupinus formosus	summer lupine	?	M	?	L	?	?	
				P						N	Lupinus latifolius	broadleaf lupine	L	?	L	L	?	?	
				P						N	Lychnis coronaria	rose campion/crown pink	L	L	L	L	?	?	
						S				N	Lycium andersonii	desert wolfberry	?	?	VL	L	?	?	
						S				N	Lycium brevipes	Baja desert thorn	?	?	VL	L	?	?	
						S				N	Lycium californicum	box thorn	?	?	VL	L	?	?	
						S				N	Lycium fremontii	wolfberry	?	L	VL	L	L	L	
		G									Lygeum spartum	false esparto grass	L	?	L	L	?	?	
								T		N	Lyonothamnus spp.	ironwood	L	/	L	L	/	/	
								T			Lysiloma watsonii	feather bush	/	/	L	L	/	L	
								V			Macfadyena unguis-cati	cat's claw	L	L	L	L	L	L	
						S				N	Malacothamnus clementinus	San Clemente Island bush	?	L	VL	L	?	/	
						S				N	Malacothamnus fasciculatus	bush mallow	VL	L	VL	L	/	/	
						S				N	Malacothamnus fremontii	Fremont's bush mallow	VL	L	VL	L	?	?	
						S				N	Malacothamnus jonesii	Jones bush mallow	L	?	VL	L	?	?	
						S				N	Malacothamnus palmeri	Palmer's mallow	L	L	L	L	?	?	
		Gc									Malephora spp.	ice plant (Maleophora)	L	L	VL	L	L	?	
						S				N	Malosma laurina (Rhus laurina)	laurel sumac	VL	L	VL	L	/	/	
						S				N	Malva assurgentiflora and cvs. (Lavatera assur)	tree mallow	L	M	L	L	/	M	
						S					Malvaviscus arboreus	Turk's cap	?	?	L	L	?	?	
				P			Su				Mammillaria geminispina	cactus	VL	?	VL	VL	VL	VL	
				P							Manfreda spp.	manfreda	L	M	L	L	M	M	
				P							Manihot spp.	cassava	/	/	M	L	?	?	
								T			Melaleuca lanceolata	black tea	?	L	L	L	/	/	
								T			Melaleuca linariifolia	flax leaf paper bark	L	L	L	L	/	/	
								T			Melaleuca nesophila	pink melaleuca	L	L	L	L	/	/	
								T			Melaleuca raphiophylla	swamp paper bark	?	/	L	L	/	/	
				P							Melampodium leucanthum	blackfoot daisy	L	/	L	L	L	L	
								T			Melia azedarach	chinaberry	VL	L	VL	L	L	L	
								V			Merremia aurea	merremia (aurea)	?	?	L	L	/	M	
						S				N	Mimulus aurantiacus (Diplacus arachnoideus)	sticky monkey flower	VL	L	VL	VL	/	/	
						S				N	Mimulus aurantiacus var. puniceus	red bush monkey flower	VL	L	VL	VL	/	/	
						S				N	Mimulus hybrids (shrubby) (Diplacus)	monkey flower	L	L	L	L	/	/	
				P							Mirabilis jalapa	four o'clock	VL	L	VL	L	M	M	
				P						N	Mirabilis laevis var. crassifolia (M. californica)	wishbone bush	L	?	VL	L	?	?	
				P						N	Mirabilis laevis var. villosa (M. bigelovii)	desert four o'clock	VL	L	VL	L	?	?	
				P						N	Mirabilis multiflora	four o'clock	L	L	?	L	?	?	
				P						N	Monardella linoides	flax leaf monardella	L	?	VL	L	?	?	
				P						N	Monardella odoratissima	mountain pennyroyal	L	M	L	L	?	?	
				P						N	Monardella villosa	coyote mint	VL	VL	VL	L	?	?	
Bu											Moraea spp.(winter growing)	moraea	VL	VL	L	VL	?	?	
		G									Muhlenbergia capillaris and cvs.	hairy awn muhly	L	L	M	L	M	M	
		G									Muhlenbergia dubia	pine muhly	L	L	L	L	?	?	

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Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
		G									Muhlenbergia dumosa	bamboo muhly	L	M	L	L	M	M	
	Bu										Muscari macrocarpum	grape hyacinth	VL	VL	VL	VL	M	M	
			Gc			S					Myoporum parvifolium & cvs.	myoporum	L	L	L	L	M	M	
	Bu										Narcissus spp.	daffodil	VL	VL	VL	VL	L	L	
		G									Nassella gigantea	giant needle grass	L	L	L	L	?	?	
	Bu										Nerine spp. (winter growing)	nerine	L	L	L	VL	M	M	
						S					Nerium oleander & cvs.	oleander	L	L	L	L	M	M	
				P							Nicotiana sylvestris	flowering tobacco	M	M	M	L	?	?	
				P		S				N	Nolina spp. (CA natives and non-natives)	bear grass	VL	VL	VL	VL	L	L	
								T		N	Notholithocarpus densiflorus (Lithocarpus densiflorus)	tanbark oak	L	/	L	L	/	/	
						S				N	Oemleria cerasiformis	osoberry	M	?	L	L	?	?	
				P						N	Oenothera caespitosa	tufted (white) evening primrose	L	L	VL	L	L	L	
				P						N	Oenothera californica	California evening primrose	?	L	VL	VL	?	L	
				P						N	Oenothera elata (E. hookeri)	Hooker's evening primrose	L	L	L	L	?	?	
			Gc	P							Oenothera macrocarpa	Missouri evening primrose	M	L	L	L	?	?	
			Gc	P							Oenothera speciosa (O. berlandieri)	Mexican evening primrose	L	L	L	L	M	M	
			Gc	P							Oenothera stubbei	Baja evening primrose	L	L	L	L	L	L	
								T			Olea europaea	olive	VL	VL	L	L	L	L	
								T	N		Olneya tesota	desert ironwood	/	/	/	L	L	L	
						S	Su		N		Opuntia spp. & cvs. (CA natives and non-natives)	prickly pear/cholla	VL	VL	VL	VL	VL	VL	
				P							Origanum spp. and cvs.	dittany/oregano etc.	M	M	L	L	?	?	
	Bu										Ornithogalum arabicum	star of Bethlehem	L	L	L	L	?	?	
	Bu										Ornithogalum thyrsoides	chinchinchee	?	?	L	L	?	?	
						S			N		Ornithostaphylos oppositifolia	Palo blanco	?	VL	VL	L	?	?	
			Gc								Oscularia deltooides	pink iceplant	L	L	L	L	?	?	
			Gc								Osteospermum spp.	African daisy	L	L	L	L	/	/	
						S	Su				Pachycereus marginatus	Mexican fence post cactus	?	?	VL	VL	VL	VL	
				P			Su				Pachyphytum spp.	moonstones	L	/	L	L	?	?	
		G									Panicum spp.	panic grass	?	L	?	L	?	?	
								T	N		Parkinsonia 'Desert Museum' (Cercidium)	Desert Museum palo verde	?	VL	VL	L	?	L	
								T			Parkinsonia 'Sonorae'	Sonoran palo verde	?	?	?	VL	/	L	
								T			Parkinsonia aculeata	Mexican palo verde/ Jerusalem	VL	VL	L	L	L	L	
								T	N		Parkinsonia florida (Cercidium florida)	blue palo verde	VL	VL	VL	VL	/	L	
								T	N		Parkinsonia microphylla (Cercidium microphyllum)	little leaf palo verde	VL	VL	VL	L	/	L	
								T			Parkinsonia praecox (Cercidium praecox)	palo brea tree	?	VL	L	L	/	L	
								T			Parrotia persica	Persian witch hazel	M	?	M	L	?	/	
						S	Su				Pedilanthus bracteatus	tall slipper plant	/	/	L	L	L	L	
						S	Su				Pedilanthus macrocarpus	slipper plant	/	/	VL	VL	L	L	
			Gc	P							Pelargonium sidoides	South African geranium	M	L	L	L	/	/	
				P						N	Pellaea andromedifolia	coffee fern	L	?	VL	L	?	?	
				P						N	Pellaea mucronata	bird's foot fern	L	?	VL	L	?	?	
		G									Pennisetum alopecuroides and cvs.	black pennisetum	L	L	M	L	?	?	
		G									Pennisetum massaicum	bunny tails	L	?	M	L	?	?	
		G									Pennisetum orientale	Chinese fountain grass	M	L	L	L	?	?	
		G									Pennisetum setaceum	fountain grass	L	L	L	L	L	L	
		G									Pennisetum x advena (P. setaceum hybrids)	purple/burgundy fountain grass	M	L	L	L	M	M	
				P						N	Penstemon SW native spp. and cvs.	penstemon (SW natives)	L	L	L	L	L	L	
				P						N	Perideridia kelloggii	yampah	M	L	?	VL	?	?	
						S				N	Peritoma arborea (Isomeris arborea)	bladderpod	VL	VL	VL	L	L	L	
				P						N	Petrophytum caespitosum	rock spirea	L	?	L	L	?	?	
				P						N	Phacelia californica	scorpion flower	L	M	?	L	?	?	
						S					Phlomis cretica	Cretan phlomis	L	L	L	L	?	?	
						S					Phlomis fruticosa	Jerusalem sage	L	L	L	L	M	M	
						S					Phlomis italica	Italian Jerusalem sage	L	L	L	L	?	?	
						S					Phlomis lanata	Crete Jerusalem sage	L	L	L	L	?	?	
						S					Phlomis purpurea (P. caballeri)	purple Jerusalem sage	L	L	L	L	?	?	
						S					Phlomis spectabilis (P. cashmeriana)	Kashmir sage	L	L	L	L	?	?	
				P							Phlomis tuberosa	tuberous jerusalem sage	M	L	L	L	?	?	
					Pm			T			Phoenix canariensis	Canary Island date palm	L	L	L	L	M	M	
					Pm			T			Phoenix dactylifera	date palm	L	L	L	L	M	M	
			Gc						N		Phyla nodiflora (Lippia nodiflora)	cape weed	L	L	L	L	/	/	
				P							Pinellia ternata	pinellia	M	?	M	L	?	?	
				P							Pinellia tripartita	voodoo lily	M	?	M	L	?	?	
								T	N		Pinus attenuata	knobcone pine	VL	L	L	L	/	/	

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Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
								T			Pinus brutia	Calabrian pine	L	L	L	L	M	M	
								T			Pinus brutia ssp. eldarica	eldarica pine	L	L	VL	L	M	M	
								T		N	Pinus coulteri	Coulter pine	L	L	L	L	M	/	
								T		N	Pinus edulis	pinyon pine	L	L	VL	L	L	/	
								T			Pinus halepensis	Aleppo pine	L	L	L	L	M	M	
								T		N	Pinus monophylla	single leaf pinyon pine	L	/	VL	L	L	/	
								T			Pinus montezumae	Montezuma pine	L	L	L	L	/	/	
								T			Pinus pinea	Italian stone pine	VL	L	L	L	M	M	
								T		N	Pinus ponderosa	ponderosa pine	VL	L	/	L	/	/	
								T		N	Pinus sabiniana	foothill pine	VL	VL	VL	L	/	/	
								T			Pittosporum angustifolium (in trade as phillyrae)	willow pittosporum	M	M	L	L	/	M	
							S				Plecostachys serpyllifolia (Helichrysum)	straw flower	L	L	L	L	?	/	
							S			N	Pluchea sericea	Coville arrow weed	?	L	M	L	L	L	
		G								N	Poa fendleriana (SHADE)	mutton grass	?	?	?	L	?	?	
		G								N	Poa secunda (SHADE)	pine bluegrass	?	L	/	L	?	?	
				P							Poliomntha longiflora	Rosemary mint	L	L	L	L	L	L	
				P						N	Polypodium californicum	California polypody	VL	VL	VL	VL	?	?	
				P		S	Su				Portulacaria afra & cvs.	elephant's food	VL	L	VL	L	L	L	
				P						N	Primula spp. (CA native)Dodecatheon spp	shooting stars	L	L	VL	VL	?	?	
								T			Prosopis alba	Argentine mesquite	/	L	L	L	L	L	
								T			Prosopis glandulosa (P. chilensis)	Chilean mesquite	/	L	L	L	L	L	
								T		N	Prosopis glandulosa var. torreyana	honey mesquite	/	L	L	L	L	L	
								T			Prosopis hybrids and cvs.	prosopis hybrids	?	?	L	L	L	L	
								T			Prosopis juliflora	Arizona mesquite	?	?	L	L	L	L	
								T		N	Prosopis pubescens	screwbean mesquite	/	L	L	L	L	L	
								T			Prosopis velutina	velvet mesquite	/	L	L	L	L	L	
						S				N	Prunus andersonii	desert peach	L	L	VL	VL	?	/	
						S				N	Prunus fasciculata	desert almond	?	?	VL	VL	VL	?	
								T		N	Prunus ilicifolia	holly leaf cherry	L	L	VL	VL	/	/	
						S	T			N	Prunus ilicifolia lyonii	Catalina cherry	L	L	L	L	/	/	
				P		S				N	Psilostrophe cooperi	paper flower	?	?	VL	L	VL	VL	
				P		S				N	Psilostrophe tagetina	paper flower	?	?	L	L	L	L	
						S				N	Psoralea arguta (Dalea spinosa)	smoke tree	/	L	/	L	/	VL	
						S				N	Ptelea crenulata	western hop tree	L	L	?	L	?	?	
								T			Punica granatum	pomegranate	L	L	L	L	M	M	
						S					Punica granatum & cultivars	dwarf pomegranate	L	L	L	L	M	M	
						S				N	Purshia glandulosa (See P. tridentata var. glandulosa)	desert bitterbrush	L	?	?	L	?	?	
						S				N	Purshia stansburyana (Cowania mexicana, Purshia stansburyana)	cliff rose	L	?	VL	L	?	?	
						S				N	Purshia tridentata	antelope bitterbrush	L	?	VL	L	?	?	
				P							Puya spp.	puya	VL	L	L	L	/	?	
				P							Pyrethropsis hosmariense (Rhodanthemum)	Moroccan daisy	L	M	L	L	?	?	
				P							Pyrrhosia spp.	felt fern	L	/	L	L	?	?	
								T			Quercus acutissima	sawtooth oak	M	M	?	L	?	?	
								T		N	Quercus agrifolia	coast live oak	VL	VL	VL	L	/	M	
						S				N	Quercus berberidifolia	California scrub oak	VL	VL	VL	L	L	/	
								T		N	Quercus chrysolepis	canyon live oak	VL	L	L	L	/	/	
								T		N	Quercus douglasii	blue oak	VL	VL	VL	L	/	/	
						S	T			N	Quercus dumosa	Nuttall's scrub oak	VL	VL	VL	L	L	/	
						S				N	Quercus durata	leather oak	VL	L	L	L	?	?	
								T		N	Quercus engelmannii	mesa oak	L	L	VL	L	/	/	
								T			Quercus gambelii	Gambel oak	?	L	?	L	L	/	
								T			Quercus ilex	holly oak	L	L	L	L	M	M	
								T			Quercus muehlenbergii	chinquapin oak	L	M	?	L	L	M	
								T			Quercus suber	cork oak	L	L	L	L	L	L	
								T			Quercus texana	Texas red oak	L	?	?	L	L	M	
						S				N	Quercus turbinella	shrub live oak	L	L	VL	L	L	/	
								T		N	Quercus wislizeni	interior live oak	VL	VL	VL	VL	M	/	
						S					Quercus x acutidens	Torrey oak	?	?	?	L	?	?	
								T		N	Quercus x morehus	oracle oak	VL	?	?	L	?	?	
				P						N	Ranunculus californicus	California buttercup	VL	VL	VL	VL	?	?	
				P							Ranunculus cortusifolius	buttercup	L	?	L	L	?	?	
		Bu									Ranunculus spp. (winter growing)	Persian ranunculus	L	M	/	VL	M	M	
						S					Rhagodia spinescens (R. deltophylla)	Australian saltbush	VL	L	VL	L	?	?	
						S				N	Rhamnus crocea	redberry	L	L	VL	L	/	?	

Appendix A WUCOLS

Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S				N	Rhamnus ilicifolia	hollyleaf redberry	L	L	VL	L	?	?	
	Bu										Rhodophiala bifida	red argentine amaryllis	L	L	L	VL	?	?	
			Gc			S				N	Rhus aromatica (Rhus trilobata)	skunk bush	L	L	L	L	?	?	
						S				N	Rhus integrifolia	lemonade berry	L	L	VL	L	/	/	
						S				N	Rhus lentii	pink-flowering sumac	/	?	VL	L	?	?	
						S				N	Rhus ovata	sugar bush	L	L	VL	L	L	L	
						S				N	Ribes amarum	bitter gooseberry	?	?	VL	L	?	?	
						S				N	Ribes aureum	golden currant	L	L	L	L	?	/	
						S				N	Ribes californicum	hillside gooseberry	VL	L	L	L	?	?	
						S				N	Ribes divaricatum	spreading gooseberry	L	?	?	L	?	?	
						S				N	Ribes indecorum	white flowering currant	L	L	VL	L	?	?	
						S				N	Ribes malvaceum	chaparral currant	VL	VL	VL	L	?	?	
						S				N	Ribes menziesii	canyon gooseberry	VL	?	L	L	?	?	
						S				N	Ribes quercetorum	yellow gooseberry	L	L	L	L	?	?	
						S				N	Ribes thacherianum	Santa Cruz Island goosebe	/	?	VL	L	?	?	
								T			Robinia pseudoacacia	black locust	VL	L	L	L	M	M	
								T			Robinia x ambigua	locust	L	L	M	L	M	M	
				P		S				N	Romneya coulteri	Matilija poppy	VL	VL	VL	VL	L	L	
				P		S				N	Romneya trichocalyx	hairy Matilija poppy	VL	VL	VL	VL	?	?	
						S				N	Rosa californica	California wild rose	L	L	L	L	/	/	
						S				N	Rosa minutifolia	Baja California wild rose	L	?	VL	L	?	?	
						S				N	Rosa woodsii subsp. ultramontana	mountain wood rose	M	M	?	L	M	?	
			Gc			S					Rosmarinus cvs.	trailing rosemary	L	L	L	L	M	M	
						S					Rosmarinus officinalis	rosemary	L	L	VL	L	M	M	
						S					Ruellia peninsularis	Baja ruellia	?	?	VL	L	L	L	
				P							Ruscus spp.	butcher's broom	L	L	L	L	?	?	
						S				N	Salvia 'Allen Chickering'	Allen Chickering sage	L	L	VL	L	L	L	
						S				N	Salvia 'Aromas'	Aromas salvia	L	L	VL	L	?	?	
			Gc			S				N	Salvia 'Bee's Bliss'	Bee's Bliss sage	L	L	L	L	?	?	
			Gc	P						N	Salvia 'Dara's Choice'	Sonoma sage	L	L	L	L	?	?	
				P		S				N	Salvia 'Gayle Nielson' (also Trident as registered)	Gayle Nielson/Trident sage	?	L	VL	L	VL	L	
			Gc	P						N	Salvia 'Mrs. Beard'	Mrs. Beard sage	?	L	L	L	?	?	
						S					Salvia africana-lutea	golden sage	L	M	L	L	?	?	
						S				N	Salvia apiana	white sage	VL	L	VL	L	L	L	
				P							Salvia argentea	silver sage	L	L	L	L	?	?	
						S				N	Salvia brandegeei	Santa Rosa island Sage	L	L	VL	L	?	?	
						S					Salvia californica	Baja California sage	/	?	VL	L	?	?	
						S					Salvia canariensis	Canary Island Sage	L	L	L	L	?	?	
						S					Salvia chamaedryoides	blue sage	L	L	L	L	M	M	
			Gc	P							Salvia chionophylla	snowflake sage	L	?	L	L	?	?	
						S				N	Salvia clevelandii & hybrids	salvia Cleveland/Alan Chick	L	L	VL	L	L	L	
						S					Salvia coahuilensis	Coahuila sage	L	?	L	L	?	?	
				P							Salvia darcy	darcy sage	M	L	L	L	?	?	
				P		S				N	Salvia dorrii	purple sage	/	M	/	L	L	M	
				P		S					Salvia greggii & hybrids	autumn sage	L	L	L	L	M	M	
				P		S					Salvia leucantha and cvs.	Mexican bush sage	L	L	L	L	/	M	
						S				N	Salvia leucophylla and cvs.	purple sage	L	L	VL	L	M	M	
						S					Salvia melissodora	grape scented sage	M	M	M	L	?	?	
						S				N	Salvia mellifera and cvs.	black/green sage	L	L	VL	L	?	?	
						S					Salvia microphylla (S. grahamii)	cherry/Graham sage	L	L	L	L	M	M	
						S				N	Salvia munzii	San Miguel Mountain sage	L	L	VL	L	/	/	
						S				N	Salvia pachyphylla	rose sage	L	L	/	L	?	?	
			Gc	P						N	Salvia sonomensis and cvs	Sonoma sage	L	L	L	L	?	?	
						S		T		N	Sambucus spp. (CA native and non-native spp)	elderberry	L	L	L	L	M	M	
				P						N	Sanicula crassicaulis	snakeroot	?	?	L	VL	?	?	
				P			Su				Sansevieria spp.	mother-in-law's tongue	/	/	L	L	/	M	
			Gc	P		S					Santolina spp.	lavender cotton	L	L	L	L	L	L	
								T			Sapindus saponaria	soapberry	?	?	M	L	?	?	
								V		N	Sarcostemma cynanchoides ssp hartwegii	climbing milkweed	?	?	L	L	?	?	
								T			Schinus molle	California pepper tree	VL	L	VL	L	M	M	
								T			Schinus polygamus	Peruvian pepper tree	VL	L	L	L	L	M	
	Bu										Scilla peruviana (S. hughii)	giant scilla	VL	VL	L	VL	?	?	
				P						N	Scrophularia californica (shade)	California figwort/bee plant	L	L	L	L	?	?	
						S					Scrophularia macrantha	red birds in a tree	?	?	?	L	?	?	

Appendix A WUCOLS

Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
				P							Scutellaria suffrutescens	pink Texas skullcap	L	?	L	L	?	?	
								T			Searsia lancea (Rhus lancea)	African sumac	L	L	L	L	M	M	
			Gc	P			Su			N	Sedum spp. (some are Hylotelephium)	stone crop	L	L	L	L	/	/	
				P			Su				Sempervivum spp.	house leek	L	L	L	L	?	?	
							S				Senecio cineraria (Jacobaea maritima)	dusty miller	L	L	L	L	M	M	
				P			Su				Senecio cylindricus (S.vitalis)(nomen unresolva	narrow leaf chalksticks	L	?	L	L	?	?	
							S			N	Senecio flaccidus var. douglasii	Douglas groundsel	VL	L	VL	L	/	M	
			Gc	P			Su				Senecio mandralisca (Kleinia mandralisca)	kleinia	L	?	L	L	?	?	
			Gc	P			Su				Senecio serpens	blue chalksticks	L	?	L	L	?	?	
				P			Su				Senecio talinoides and cvs. (nomenclature unresol	blue finger	L	/	L	L	?	?	
				P							Senecio viravira	dusty miller	L	L	L	L	?	?	
							S				Senna artemisioides (Cassia artemisioides)	feathery cassia/senna	L	L	L	L	L	L	
							S				Senna didymobotrya (Cassia didymobotrya)	popcorn senna	?	?	L	L	?	?	
							S				Senna nemophila (Cassia nemophila)	desert cassia	?	L	L	L	L	L	
							S				Senna odorata (Cassia odorata)	southern senna	?	?	L	L	?	L	
							S				Senna phyllodinea (Cassia phyllodinea)	silver leaf cassia/senna	?	?	L	L	L	L	
							S				Senna purpusii	Baja California senna	?	?	VL	L	?	?	
							S				Senna sturtii (Cassia sturtii)	Sturt's cassia/senna	/	/	L	L	L	L	
							S				Senna wislizeni (Cassia wislizeni)	shrubby senna	?	?	L	L	L	L	
							S			N	Shepherdia argentea	silver buffaloberry	L	?	VL	VL	?	?	
				P						N	Silene spp. (CA native and non-native spp.)	moss pink/campion	M	M	L	L	?	?	
							S			N	Simmondsia chinensis	jojoba	VL	VL	VL	VL	L	L	
				P						N	Sisyrinchium bellum and cvs.	blue-eyed grass	VL	L	L	VL	/	/	
							S				Solanum hindsianum	mariola	?	?	VL	L	?	?	
							S			N	Solanum umbelliferum and cvs.	blue witch	L	M	VL	L	?	?	
				P						N	Solanum wallacei	Wallace's nightshade	?	?	L	L	?	?	
							S			N	Solanum xanti and cvs.	blue witch	L	M	VL	L	/	/	
			Gc				S				Sollya heterophylla	Australian bluebell creeper	L	L	L	L	/	/	
								V			Sollya heterophylla f. parviflora	vining bluebell	L	L	L	L	/	/	
							S				Sonchus canariensis	tree sonchus	M	?	VL	VL	?	?	
							S	T			Sophora secundiflora	Texas mountain laurel	L	L	L	L	L	L	
Bu											Sparaxis spp.	Harlequin flower	VL	M	VL	VL	?	?	
							S				Spartium junceum	Spanish broom	VL	VL	VL	VL	VL	/	
				P						N	Sphaeralcea spp. (CA native and non-native spp.)	desert/globe mallow	L	L	L	L	VL	VL	
			G							N	Sporobolus airoides	alkalai sacaton	L	VL	L	L	L	L	
			G							N	Sporobolus wrightii	big sacaton	L	VL	VL	L	L	?	
Bu											Sprekelia formosissima	Aztec lily	L	L	L	L	?	?	
				P						N	Stachys bullata (shade)(S. californica)	hedge nettle	L	?	L	L	?	?	
				P						N	Stachys pycnantha	pale hedge nettle	?	?	?	L	?	/	
							S	Su			Stenocereus thurberi (Lemaireocereus)	organ pipe cactus	/	/	VL	L	/	VL	
			G							N	Stipa cernua (Nassella cernua)	nodding needlegrass	VL	VL	VL	VL	?	?	
			G							N	Stipa comata	needle and thread grass	?	VL	VL	L	?	?	
			G							N	Stipa lepida (Nassella lepida)	foothill needlegrass	VL	VL	VL	VL	?	?	
			G							N	Stipa pulchra (Nassella pulchra)	purple needlegrass	VL	VL	VL	VL	?	?	
			G								Stipa ramosissima (Austrostipa ramosissima)	pillar of smoke grass	L	L	L	L	?	?	
			G								Stipa tenuissima (Nassella tenuissima)	Mexican feather grass	L	L	L	L	L	M	
							S				Strelitzia reginae var juncea	narrow-leaved bird of paradise	M	?	L	L	?	?	
							S			N	Styrax redivivus (S. californicus, S. fulvescens)	snowdrop bush	L	L	L	L	M	/	
							S				Swainsona galegifolia	winter sweet pea	M	?	L	L	?	?	
							S			N	Symphoricarpos albus (SHADE)	snowberry	L	L	L	L	?	?	
							S				Symphoricarpos hybrids (SHADE)	snowberry	L	L	?	L	?	?	
							S			N	Symphoricarpos longiflorus (SHADE)	desert snowberry	L	L	/	L	?	?	
			Gc							N	Symphoricarpos mollis (shade in SD)	creeping snowberry	L	L	L	L	?	/	
							S				Symphoricarpos orbiculatus (SHADE)	coralberry	M	L	?	L	?	?	
							S			N	Symphoricarpos rotundifolius (SHADE)	round leaf snowberry	L	L	/	L	?	?	
				P			S				Tagetes lemmonii	mountain marigold	L	L	L	L	M	M	
								T		N	Tamarix aphylla	salt cedar	VL	VL	L	L	VL	VL	
							S				Tamarix pentaphylla	tamarisk	VL	VL	L	L	VL	VL	
				P							Tanacetum coccineum (Pyrethrum roseum)	painted daisy	M	/	L	L	?	?	
							S				Tecoma 'Crimson Flare'	yellow bells	L	/	L	L	M	M	
							S				Tecoma 'Sunrise'	Sunrise tecoma	L	?	L	L	M	M	
							S				Tecoma fulva spp. guarume (T.'Orange Jubilee)	Orange Jubilee tecoma	M	M	L	L	M	M	
							S	T			Tecoma stans	yellow bells	L	/	L	L	M	M	
							S				Tecoma x alata 'Flaming Bells'	Flaming Bells	L	?	L	L	?	?	

Appendix A WUCOLS

Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S					Tecoma x smithii	orange bells	?	?	M	L	?	?	
				P						N	Tetranneuris acaulis (Hymenoxys acaulis)	stemless four-nerve daisy	L	?	L	L	L	L	
						S					Tetrapanax papyrifera	rice paper plant	L	M	M	L	?	?	
			Gc	P		S					Teucrium chamaedrys	germander	L	L	L	L	M	M	
			Gc	P							Teucrium cossonii	Majorcan germander	VL	L	L	L	?	?	
						S					Teucrium flavum	yellow germander	L	L	?	L	?	?	
						S					Teucrium fruticans	bush germander	L	L	L	L	M	M	
				P							Teucrium marum	cat thyme	L	L	L	L	?	?	
				P							Thermopsis montana	golden banner	M	?	?	L	?	?	
								T			Toona sinensis (Cedrela sinensis)	Chinese toon	L	M	L	L	?	?	
Bu										N	Toxicocordion fremontii (Zygadenus fremontii)	star lily	VL	VL	VL	VL	?	?	
					Pm			T			Trachycarpus fortunei	windmill palm	L	M	M	L	M	M	
				P		S				N	Trichostema lanatum	woolly blue curls	VL	VL	VL	L	/	/	
						S				N	Trichostema parishii	mountain blue curls	VL	VL	VL	L	/	/	
			Gc								Trifolium fragiferum O'Connor (revegetation us)	O'Connor's legume	L	L	L	L	/	/	
				P						N	Trillium chloropetalum	wake robin	M	?	/	VL	?	?	
Bu										N	Triteleia hyacinthina	white brodiaea	VL	VL	VL	VL	?	?	
Bu										N	Triteleia laxa	Ithurie's spear	VL	VL	VL	VL	?	?	
Bu										N	Triteleia peduncularis	long-rayed brodiaea	VL	VL	VL	VL	?	?	
Bu											Tritonia spp.	tritonia	L	?	VL	VL	?	?	
						S				N	Trixis californica	trixis	?	?	VL	L	L	L	
								T			Ulmus parvifolia	Chinese evergreen elm	L	M	M	L	M	M	
								T			Ulmus pumila	Siberian elm	L	L	/	L	M	M	
Bu											Urginea maritima	sea squill	L	L	VL	VL	/	/	
								T			Vachellia farnesiana (Acacia farnesiana)	sweet acacia	VL	L	L	VL	/	L	
								T			Vachellia farnesiana var. farnesiana (Acacia farnesiana)	desert sweet acacia	/	/	VL	VL	/	L	
			Gc	P						N	Vancouveria spp. (shade)	inside-out flower	M	/	/	L	?	?	
Bu											Veltheimia bracteata	forest lily	M	?	L	VL	?	?	
Bu											Veltheimia capensis	sand lily	L	?	L	VL	?	?	
				P						N	Venegasia carpesioides	canyon sunflower	?	?	L	L	?	?	
				P							Verbascum bombyciferum	silver mullein	L	L	M	L	?	?	
				P							Verbascum phoeniceum	purple mullein	L	L	L	L	?	?	
				P							Verbena bonariensis	verbena (bonariensis)	VL	L	L	L	M	?	
				P						N	Verbena gooddingii (Glandularia gooddingii)	Goodding verbena	L	L	VL	L	L	L	
				P						N	Verbena lasiostachys	robust verbena	L	L	?	L	?	?	
			Gc	P							Verbena peruviana	Peruvian verbena	L	L	L	L	M	M	
			Gc	P							Verbena rigida	vervain	L	M	L	L	M	M	
			Gc	P							Verbena tenuisecta	moss verbena	L	L	L	L	M	M	
						S				N	Viguiera lanata	woolly-leaf sunflower	L	L	VL	L	?	?	
						S					Viguiera parishii	desert goldeneye	L	L	VL	L	L	L	
								T			Vitex agnus-castus	chaste tree	L	L	L	L	L	L	
									V	N	Vitis 'Roger's Red'	Roger's Red grape	L	L	L	L	M	?	
									V	N	Vitis californica	California wild grape	L	VL	L	L	M	M	
									V	N	Vitis girdiana	desert grape	L	L	L	L	M	M	
					Pm			T		N	Washingtonia filifera	California fan palm	L	M	M	L	M	M	
					Pm			T			Washingtonia robusta	Mexican fan palm	L	M	L	L	M	M	
						S					Westringia 'Wynabbie Gem'	Wynabbie Gem westringia	L	L	L	L	/	?	
						S					Westringia fruticosa (rosmariniformis)& hybrids	coast rosemary	L	L	L	L	/	?	
				P						N	Whipplea modesta (shade)	modesty	L	?	M	L	?	?	
Bu											X Amarcrinum memoria-corsii	crinodonna	L	VL	M	VL	?	?	
Bu											X Amarygia hybrids	amarygia	VL	VL	VL	VL	?	?	
								T			X Chiranthofremontia lenzii	hybrid monkey hand tree	L	L	L	L	?	?	
								T			X Chitalpa tashkentensis	chitalpa	L	L	L	L	L	L	
				P		Su					X Graptosedum cultivars	graptosedum	L	/	L	L	?	?	
						S					X Halimocistus sahuicii	hybrid rockrose	L	?	L	L	?	?	
						S					X Halimocistus wintonensis	halimocistus	L	L	L	L	?	?	
				P		Su					X Mangave cvs.	mangave	L	?	L	L	?	?	
				P		Su					X Pachyveria spp.	pachyveria	L	?	L	L	?	?	
						S					X Ruttyruspolia 'Phyllis Van Heerden'	Phyllis Van Heerden ruttyru	?	?	M	L	?	?	
				P		Su					X Sedeveria cvs	stonecrop	L	M	L	L	?	?	
				P							Xanthorrhoea spp.	grass tree	L	/	L	L	/	/	
				P		S				N	Xylococcus bicolor	mission manzanita	L	?	VL	L	?	/	
						S	Su				Yucca aloifolia	Spanish bayonet	VL	?	L	VL	L	L	
						S	Su			N	Yucca baccata	banana yucca	VL	?	VL	VL	VL	L	

Appendix A WUCOLS

Region

Ba	Bu	G	Gc	P	Pm	S	Su	T	V	N	Botanical Name	Common Name	1	2	3	4	5	6	
						S	Su			N	Yucca brevifolia	Joshua tree	VL	/	/	VL	VL	VL	
						S	Su				Yucca elata	soaptree yucca	VL	?	VL	VL	VL	L	
						S	Su				Yucca elephantipes	giant yucca	VL	?	L	VL	?	?	
						S	Su				Yucca faxoniana	giant white yucca	?	?	?	VL	VL	L	
						S	Su				Yucca filamentosa & cvs.	Adam's needle	L	M	VL	VL	L	?	
						S	Su				Yucca gloriosa	Spanish dagger	L	L	L	VL	L	L	
						S	Su				Yucca recurvifolia	curve leaf yucca	?	?	L	VL	L	M	
						S	Su				Yucca rigida	blue yucca	VL	?	VL	VL	VL	L	
						S	Su				Yucca rostrata	beaked yucca	VL	?	VL	VL	VL	L	
						S	Su			N	Yucca schidigera (Y. californica, Y. moha	Mojave yucca	VL	?	VL	VL	VL	VL	
	Bu										Zephyranthes candida	white rain lily	M	L	M	L	L	M	
			Gc	P							Zinnia grandiflora	prairie zinnia	L	M	L	L	L	L	

Appendix B

SAMPLE CALCULATIONS FOR SINGLE FAMILY RESIDENTIAL, MULTI FAMILY RESIDENTIAL, AND COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL CUSTOMERS

Planting Plans shall be prepared using the following Water Budget Formulas for Single Family Residential, Multi Family Residential and Commercial, Industrial and Institutional customers:

Maximum Applied Water Allowance (MAWA)

$$\text{MAWA (in gallons)} = (\text{ET}_0)(0.62)[(0.6 \times \text{LA})]$$

Where:

MAWA - Maximum Applied Water Allowance (gallons per year)

ET_0 - Reference Evapotranspiration (inches per year)

0.62 - Conversion Factor (to gallons)

0.6—ET Adjustment Factor (ETAF)

LA - Landscape Area including SLA (square feet)

$$\text{Example: } (55) (0.62)[(0.6 \times 4,870)] = 99,640 \text{ gallons}$$

Estimated Total Water Use (ETWU)

$$\text{ETWU (in gallons)} = (\text{ET}_0)(0.62)[((\text{PF} \times \text{HA}) / \text{IE})] \text{ Where:}$$

EAU—Estimated Annual Water Use

ET_0 - Reference Evapotranspiration (inches per year)

0.62 - Conversion Factor

PF - Plant Factor from Water Use Classification of Landscape Species (WUCOLS)

HA - Hydrozone Area [low and very low water use areas] (square feet)

IE - Irrigation Efficiency (minimum 0.71)

$$\text{Example: } (55) (0.62)[((0.2 \times 4,870) / 0.71)] = 46,779 \text{ gallons}$$

Appendix C

SAMPLE CALCULATIONS FOR COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL CUSTOMERS WITH SPECIAL LANDSCAPE AREAS

Planting Plans shall be prepared using the following Water Budget Formulas for Commercial, Industrial and Institutional customer with Special Landscape Areas (SLA) such as recreational area, area permanently and solely dedicated to edible plants, and area irrigated with recycled water:

Maximum Applied Water Allowance (MAWA)

$$\text{MAWA (in gallons)} = (\text{ET}_0)(0.62)[(0.6 \times \text{LA}) + (0.4 \times \text{SLA})]$$

Where:

- MAWA - Maximum Applied Water Allowance (gallons per year)
- ET_0 - Reference Evapotranspiration (inches per year)
- 0.62 - Conversion Factor (to gallons)
- 0.6—ET Adjustment Factor (ETAF)
- LA - Landscape Area including SLA (square feet)
- 0.4—Additional Water Allowance for SLA
- SLA — Special Landscape Area (square feet)

$$\text{Example: } (55) (0.62)[0.6 \times 20,000 + (0.4 \times 2,000)] = 436,480 \text{ gallons}$$

Estimated Total Water Use (ETWU)

$$\text{ETWU (in gallons)} = (\text{ET}_0)(0.62)[((\text{PF} \times \text{HA}) / \text{IE}) + (0.4 \times \text{SLA})] \text{Where:}$$

- EAWU—Estimated Annual Water Use
- ET_0 - Reference Evapotranspiration (inches per year)
- 0.62 - Conversion Factor
- PF - Plant Factor from Water Use Classification of Landscape Species (WUCOLS)
- HA - Hydrozone Area [low and very low water use areas] (square feet)
- 0.4 - Additional Water Allowance for SLA
- IE - Irrigation Efficiency (minimum 0.71)
- SLA — Special Landscape Area (square feet)

$$\text{Example: } (55) (0.62)[((0.2 \times 20,000 / 0.71) + (0.4 \times 2,000))] = 163,680 \text{ gallons}$$

ATTACHMENT B

**Wildomar Municipal Code
Section 17.276 (Water Efficient Landscapes) Text**

Chapter 17.276

WATER-EFFICIENT LANDSCAPES*

Sections:

- 17.276.010 Purpose.
- 17.276.020 Definitions.
- 17.276.030 Applicability.
- 17.276.040 Exemptions.
- 17.276.050 Landscape water use standards.
- 17.276.060 Implementation procedures.
- 17.276.070 Water waste prevention—Existing landscaping.
- 17.276.080 Delegation.

* Prior history: Ord. 18, RCC §§ 17.276.010—17.276.050.

17.276.010 Purpose.

The purpose of this chapter is to establish water efficient landscape regulations that are “at least as effective in conserving water as” the State Model Water Efficient Landscape Ordinance in the context of conditions in the City in order to ensure that landscapes are planned, designed, installed, maintained, and managed in a manner that uses water efficiently, encourages water conservation, and prevents water waste. The intent of this chapter is to encourage the cooperation between the City and local water purveyors to achieve irrigation efficiency and water conservation goals. (Ord. 46 § 2, 2010)

17.276.020 Definitions.

For the purposes of this chapter and the guidelines for the implementation of this chapter, the following terms are defined:

“Applied water” means the portion of water supplied by the irrigation system to the landscape.

“Estimated applied water use” means the average annual total amount of water estimated to be necessary to keep plants in a healthy state, calculated as provided in the Guidelines. It is based on the reference evapotranspiration rate, the size of the landscape area, plant water use factors, and the relative irrigation efficiency of the irrigation system. Also known as the “EAWU.”

“Evapotranspiration adjustment factor” means the local reference for evapotranspiration using site-specific plant factors and irrigation efficiency factors that influence the amount of water that needs to be applied to the specific landscaped area. It is calculated by dividing. Also known as the “ET adjustment factor” or “ETAF.”

“Guidelines” refers to the Guidelines for Implementation of the Water Efficient Landscape Ordinance, as approved by the City, which describes procedures, calculations, and requirements for landscape projects subject to this chapter.

“Hardscape” means any durable material or feature (pervious and non-pervious) installed in or around a landscaped area, such as pavements or walls. Pools and other water features are considered part of the landscaped area and are not considered hardscape.

“Homeowner-installed” means any landscaping either installed by a private individual for a single-family residence or installed by a licensed contractor hired and paid directly by a homeowner. A “homeowner,” for purposes of this chapter, is a person who occupies the dwelling he or she owns. This definition excludes speculative homes, which are not owner-occupied dwellings and which are subject under this chapter to the requirements applicable to developer-installed residential landscape projects.

“Hydrozone” means a portion of the landscaped area having plants with similar water needs and typically irrigated by one valve/controller station. A hydrozone may be irrigated or non-irrigated.

- "Irrigation efficiency" means the measurement of the amount of water beneficially used divided by the amount of water applied to the landscaped area. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. Also known as "IE."
- "Landscape architect" means a licensed landscape architect in the State of California.
- "Landscape documentation package" means the construction plans and specification and other supporting documentation required to review and approve landscape construction projects subject to this chapter.
- "Landscape rehabilitation" means any re-landscaping project that meets the applicability criteria of Section 17.276.030(A) of this chapter and where the modified landscape area is greater than 2,500 square feet or where the cumulative modified area is greater than 2,500 square feet if the modifications are planned to occur incrementally within one year.
- "Landscaped area" means all the planting areas, turf areas, and water features in a landscape design plan subject to the maximum applied water allowance and estimated applied water use calculations. The landscaped area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscape, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).
- "Maximum applied water allowance" means the upper limit of annual applied water for the landscaped area. It is based upon the area's reference evapotranspiration, the ET adjustment factor, and the size of the landscaped area. Also known as "MAWA."
- "Mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.
- "New landscape" means, for the purposes of this chapter, a new building with a landscape or other new landscape such as a park, playground, or greenbelt without an associated building.
- "Pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.
- "Plant factor" or "plant water use factor" is a factor, when multiplied by reference evapotranspiration that estimates the amount of water needed by plants. (The plant factors cited in this chapter are derived from the Department of Water Resources 2000 publication "Water Use Classification of Landscape Species" also known as "WUCOLS.")
- "Recycled water" or "reclaimed water" means treated or recycled waste water of a quality suitable for non-potable uses such as landscape irrigation and water features. This water is not intended for human consumption.
- "Reference evapotranspiration" means a standard measurement of environmental parameters which affect the water use of plants. Reference evapotranspiration factor is given expressed in inches per day, month, or year as represented in the Guidelines, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the maximum applied water allowances. Also known as "ETo."
- "Smart automatic irrigation controller" means an automatic timing device used to remotely control valves that operate an irrigation system and which schedules irrigation events using either evapotranspiration (weather-based) or soil moisture data.
- "Special landscape area" means an area of the landscape dedicated solely to edible plants such as orchards and vegetable gardens; areas irrigated with recycled water; water features using recycled water; and areas dedicated to active play where turf provides a playing surface, such as parks, sports fields, and golf courses.
- "Turf" means a groundcover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermuda grass, Kikuyu grass, Seashore Paspalum, St. Augustine grass, Zoysia grass, and Buffalo grass are warm-season grasses.

"Water feature" means a design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied). The surface area of water features is included in the high water use hydrozone of the landscaped area. Constructed wetlands used for on-site wastewater treatment, habitat protection, or storm water best management practices that are not irrigated and used solely for water treatment or stormwater retention are not water features. (Ord. 46 § 2, 2010)

17.276.030 Applicability.

This chapter shall apply to the following landscape projects:

- A. New landscape installations or landscape rehabilitation projects by public agencies or private nonresidential developers, except for cemeteries, with a landscaped area, including water features but excluding hardscape, equal to or greater than 2,500 square feet, and which are subject to a discretionary approval of a landscape plan, or which otherwise require a ministerial permit for a landscape or water feature.
- B. New landscape installations or landscape rehabilitation projects by developers or property managers of single-family and multifamily residential projects or complexes with a landscaped area, including water features but excluding hardscape, equal to or greater than 2,500 square feet, and which are subject to a discretionary approval of a landscape plan, or which otherwise require a ministerial permit for a landscape or water feature.
- C. New landscape installations that are homeowner-installed, including homeowner-hired, in single-family or multifamily residential lots with a total project landscaped area equal to or greater than 5,000 square feet and which are otherwise subject to a discretionary approval of a landscape plan, or which otherwise require a ministerial permit for landscaping or water feature.
- D. New cemeteries are only required to submit information on water calculations and irrigation scheduling and maintenance activities. (Ord. 46 § 2, 2010)

17.276.040 Exemptions.

This chapter shall not apply to:

- A. Registered local, state, or federal historical sites;
- B. Ecological restoration projects that do not require a permanent irrigation system;
- C. Mined-land reclamation projects that do not require a permanent irrigation system;
- D. Plant collections, as part of botanical gardens and arboretums open to the public;
- E. Existing cemeteries, except that the water waster prevention provisions of Section 17.276.070 are still applicable to the existing facilities;
- F. The requirements of this chapter may be partially or wholly waived at the discretion of the City Manager or his/her designee, for landscape rehabilitation projects that are limited to the replacement of plantings with equal or lower water needs and where any modifications to the irrigation system do not require ministerial permits and the irrigation system is found to be designed, operable, and programmed consistent with minimizing water waste in accordance with local water purveyors regulations. (Ord. 46 § 2, 2010)

17.276.050 Landscape water use standards.

- A. For applicable new landscape or landscape rehabilitation projects subject to Section 17.276.030, the estimated applied water use allowed for the landscaped area may not exceed the maximum applied water allowance calculated using an evapotranspiration adjustment factor of 0.7, except for the portion of the maximum applied water allowance applicable to any special landscaped areas within the landscape project, which may be calculated using an evapotranspiration adjustment factor of 1.0.

- B. Where the design of the landscaped area can be otherwise shown to be equivalently water efficient, the applicant may submit alternative or abbreviated information supporting the demonstration that the annual estimated applied water use is less than the maximum applied water allowance, at the discretion of and review and approval of the City Manager or designee.
- C. The irrigation of all landscaped areas installed pursuant to this chapter shall be conducted in a manner conforming to the rules and requirements of the program and the approved Landscape Documentation Package. Violations are subject to penalties and/or incentives for water conservation and water waste prevention as determined and implemented by the City and/or local water purveyor. (Ord. 46 § 2, 2010)

17.276.060 Implementation procedures.

- A. A landscape documentation package shall be submitted to the City for review and approval prior to the issuance of any permits to install or construct any landscape-related improvements.
- B. A landscape documentation package submitted to the City shall comply with provisions of this chapter and any adopted guidelines. The landscape documentation package shall include, at a minimum, a certification of preparation by the project landscape architect stating that the landscape design plan, soil management report, irrigation design plan, and water use calculations have been prepared by or under the supervision of the landscape professional and are in compliance with the provisions of this chapter and any applicable guidelines.
- C. Prior to the final inspection of a new landscape installation, the applicant shall submit a certification of completion to the Planning Director. The certification of completion shall, at a minimum, include information on the scheduling and timing of irrigation, system maintenance requirements, and identify City of Wildomar Planning Department approved changes to the approved plans that may have occurred during the construction/installation process.
- D. The City may adopt guidelines to further refine, describe, and implement the requirements of this chapter. (Ord. 46 § 2, 2010)

17.276.070 Water waste prevention—Existing landscaping.

- A. The irrigation of landscaping installed prior to the effective date of the ordinance codified in this chapter, or exempt from the provisions of this chapter, shall be operated and maintained to avoid wasteful practices such as the watering of adjacent hardscape areas, runoff to the street, and watering during windy conditions.
- B. Irrigation of all landscaped areas must be conducted in a manner conforming to the rules and requirements, and be subject to penalties and incentives for water conservation and water waste prevention established by Elsinore Valley Municipal Water District Ordinance 185, as may be subsequently amended.
- C. The City will work with the local water purveyor(s) to provide recommendations on how to increase water efficiency for existing landscapes. (Ord. 46 § 2, 2010)

17.276.080 Delegation.

The City may delegate to, or enter into an agreement with, one or more local agencies to implement, administer, and/or enforce any of the provisions of this chapter on behalf of the City. (Ord. 46 § 2, 2010)