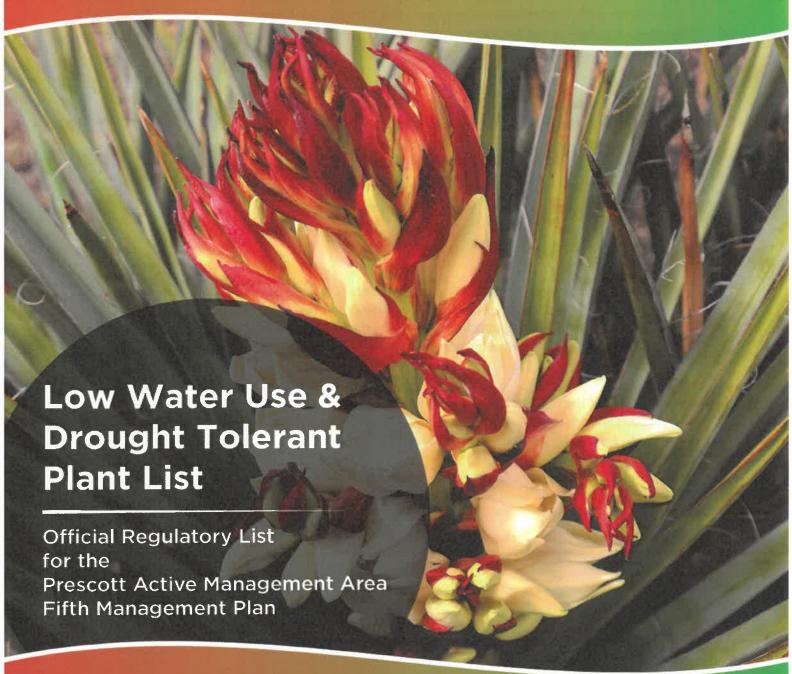


Arizona Department of Water Resources Prescott Active Management Area



Acknowledgements

The list of plants in this document was prepared in November 2006 by the Arizona Department of Water Resources (ADWR) in cooperation with plant and landscape plant specialists from the Prescott AMA and other experts. ADWR staff have periodically made updates to the list in consultation with horticultural experts, including Kara Barron, Kristen Kindl, and Raul Puente of the Desert Botanical Garden. ADWR extends its gratitude to the following members of the Prescott AMA Plant List Advisory Committee for their generous contribution of time and expertise:

Dusty Eiker, Mountain West Landscape Resources
Charlie Hildebrant, Mountain Path Landscaping
Steve Morgan, T. Barnabas Kane & Associates
Jeff Schalau, University of Arizona - Yavapai County Cooperative Extension
Nichole Trushell, Highland Center for Natural History
Harold Watters, Watters Design and Garden Center

Introduction

The Low Water Use and Drought Tolerant Plant Lists (LWUPLs) are developed in collaboration with plant experts and used by the Arizona Department of Water Resources (ADWR) to regulate landscaping in medians and public rights-of-way irrigated with any amount of groundwater and in other instances as described in the Management Plans¹ for each of the state's five Active Management Areas (AMAs).

The lists enable the regulated community to identify which plants are permitted in these specific landscapes and enable ADWR to ensure only low water use plant materials are used. The lists are specific to each AMA, as these differ in elevation, temperatures, and precipitation.

This is not a comprehensive list of all the plants that could be appropriate for other applications in the AMAs.

¹ The 1980 Groundwater Code requires the preparation of a series of water management plans for each AMA that include mandatory conservation programs. The proposed <u>Fifth Management Plan Draft for the Prescott Active</u> Management Area was issued on January 31, 2022.

^{*}Cover image courtesy of the Arizona Municipal Water Users Association.

Prescott AMA Management Plans

The restrictions on the plant material allowed in medians and public rights-of-way, and in other instances, are described in the Prescott AMA Fifth Management Plan¹ (5MP). Following are the sections in the Prescott AMA 5MP in which the LWUPL is referenced:

- Section 5-1101(27) and (44), Definitions: Low Water Use & Drought Tolerant Plant List,
 Water-intensive landscaped area
- Section 5-1110(A)(3), Individual User Requirements for Municipal Providers and Individual Users
- Section 5-Appendix 5B. II (4.1), (5.7) and (6.7), Non-Per Capita Conservation Program
 Best Management Practices
- Section 6.2, Industrial Conservation Programs Description
- Section 6.2.1.2, Additional Conservation Requirements
- Section 6-401(3), Definitions: Low Water Use & Drought Tolerant Plant List
- Section 6-402(4) and (5), Conservation Requirements
- Section 6-403(1.6), Monitoring and Reporting Requirements: Requirements
- Section 6-501(9) and (18), Definitions: Low water use landscaped area, Turf acres
- Section 6-502(C)(2), Conservation Requirements for All Turf-Related Facilities: Limiting Water-Intensive Landscaped Area
- Section 6-505(B)(1), Allotment Additions: Revegetation Additions
- Section 6-1201(5.a), Definitions: Water-intensive landscaped areas
- Section 6-1203(3), Monitoring and Reporting Requirements

How to Use the List

Not every plant listed is suitable to every median, public right-of-way, or low water use landscape situation. It is the responsibility of the regulated stakeholder, landscape designer, landscape architect, or contractor to research plant characteristics and commercial availability and determine which plants are suitable for a specific location and situation.

The Prescott AMA 5MP LWUPL is organized in tables according to plant type (growth form). Plants are placed in the plant type categories where they are most often used. This does not preclude classifying plants in one or more different plant types.

The plant types used in the Prescott AMA 5MP LWUPL are the following:

- Annual
- Cactus & Succulent
- Grass
- Groundcover

- Perennial
- Shrub
- Tree
- Vine

Each table lists the botanical names of the plants in alphabetical order, in addition to their respective common names. Some species include a synonym, or past botanical name, in parenthesis. See *Example 1* below for formatting:

Perennial	
Botanical Name (Synonyms)	Common Names
Achillea millefolium	Common Yarrow, White Yarrow
Agastache cana	Mosquito Plant, Texas Hummingbird Mint
Asclepias tuberosa	Butterfly Milkweed, Butterfly Weed
Baileya multiradiata	Desert Marigold, Desert Baileya, Wild Marigold
Berlandiera lyrata	Lyreleaf Greeneyes, Chocolate Flower
Cleome spinosa	Spiny Spiderflower, Spiderflower
Coreopsis grandiflora	Largeflower Tickseed, Coreopsis, Tickseed
Coreopsis tinctoria	Golden Tickseed, Plains Coreopsis, Golden Coreopsis
Datura wrightii (D. meteloides, D. innoxia)	Sacred Thorn-Apple, Sacred Datura, Jimson Weed

Example 1

Steps to Locate Plants in the LWUPL:

1. Identify Plant Type (ex: Annual)

2. Locate Plant Genus (ex: *Chlyismia*)

3. Locate Plant Species (ex: Chlyismia cardiophylla)

Alternatively, search for botanical or common names using the Ctrl + F buttons on the computer keyboard or similar digital document search method.

Notes:

- Both botanical and common names reflect the most up to date taxonomy for 2021.
- Genus: If the genus has "spp." next to the name (ex: Cosmos spp.), this means that any
 plant species, hybrid, and/or cultivar under the genus is eligible to be used in a median
 or right-of-way irrigated by groundwater in the Prescott AMA.
- Species: Some plant species can be found under more than one plant type.
- See *Appendix A* for Relevant Definitions for the Low Water Use and Drought Tolerant Plant List (p. 10).
- See Appendix B for Additional Resources (p. 11).
- See Appendix C for Request to Modify or Waive the Requirements (p. 12).

Annual	
Botanical Name	Common Names
Eschscholzia californica	California Poppy
Linum lewisii	Lewis Flax, Blue Flax, Prairie Flax

Cactus & Succulent	
Botanical Name	Common Names
Agave parryi	Parry's Agave, Century Plant, Agave
Dasylirion wheeleri	Common Sotol, Sotol, Desert Spoon
Hesperaloe parviflora	Redflower False Yucca, Red Yucca, Red Hesperaloe
Nolina microcarpa	Sacahuista, Bear Grass
Opuntia spp.	Prickly Pear
Yucca spp.	Yucca

Grass	
Botanical Name	Common Names
Aristida purpurea	Purple Three-Awn
Bothriochloa barbinodis	Cane Bluestem, Cane Beardgrass, Pitted Beardgrass
Bouteloua curtipendula	Sideoats Grama
Bouteloua eriopoda	Black Grama
Bouteloua gracilis	Blue Grama, Eyelash Grass
Bouteloua hirsuta	Hairy Grama
Eragrostis intermedia	Plains Lovegrass
Festuca glauca	Blue Fescue
Helictotrichon sempervirens	Blue Oat Grass
Koeleria pyramidata	Prairie Junegrass, Junegrass
Lycurus phleoides	Common Wolfstail, Wolftail
Muhlenbergia capillaris 'Regal Mist'	Regal Mist, Regal Mist Deergrass
Muhlenbergia emersleyi	Bullgrass, Bull Muhly
Muhlenbergia lindheimeri 'Autumn Glow'	Autumn Glow Muhly
Muhlenbergia rigens	Deergrass, Deer Muhly
Nassella tenuissima	Finestem Needlegrass, Mexican Feather Grass, Mexican Thread Grass
Pascopyrum smithii	Western Wheatgrass
Schizachyrium scoparium	Little Bluestem
Sporobolus airoides	Alkali Sacaton, Alkali Dropseed

Groundcover	
Botanical Name	Common Names
Cotoneaster dammeri	Lowfast Cotoneaster, Bearberry Cotoneaster
Oenothera berlandieri	Mexican Evening Primrose, Showy Evening Primrose, Berlandier Primrose
Santolina chamaecyparissus	Lavender Cotton, Gray Santolina
Teucrium chamaedrys 'Prostratum'	Prostrate Germander, Creeping Germander, Germander

Perennial	
Botanical Name (Synonyms)	Common Names
Achillea millefolium	Common Yarrow, White Yarrow
Agastache cana	Mosquito Plant, Texas Hummingbird Mint
Asclepias tuberosa	Butterfly Milkweed, Butterfly Weed
Baileya multiradiata	Desert Marigold, Desert Baileya, Wild Marigold
Berlandiera lyrata	Lyreleaf Greeneyes, Chocolate Flower
Cleome spinosa	Spiny Spiderflower, Spiderflower
Coreopsis grandiflora	Largeflower Tickseed, Coreopsis, Tickseed
Coreopsis tinctoria	Golden Tickseed, Plains Coreopsis, Golden Coreopsis
Datura wrightii (D. meteloides, D. innoxia)	Sacred Thorn-Apple, Sacred Datura, Jimson Weed
Eriogonum spp.	Buckwheat
Gaillardia grandiflora	Blanketflower
Helianthemum nummularium	Sunrose, Rockrose
Heliomeris multiflora	Showy Goldeneye
Iris germanica	German Iris, Bearded Iris
Kniphofia uvaria	Red Hot Poker
Melampodium leucanthum	Plains Blackfoot, Blackfoot Daisy
Mirabilis multiflora	Colorado Four O'Clock, Desert Four O'Clock, Giant Four O'Clock
Monarda spp.	Beebalm
Oenothera caespitosa	Tufted Evening Primrose, White Evening Primrose
Penstemon spp.	Penstemon, Beardtongue
Salvia greggii	Autumn Sage, Red Chihuahuan Sage
Senecio spp.	Groundsel
Tetraneuris acaulis	Stemless Four-Nerve Daisy, Angelita Daisy, Arizona Actinea
Teucrium chamaedrys	Wall Germander, Germander

Perennial	
Botanical Name (Synonyms)	Common Names
Zinnia grandiflora	Rocky Mountain Zinnia, Plains Zinnia, Prairie Zinnia

Shrub	
Botanical Name	Common Names
Amelanchier laevis	Allegheny Serviceberry, Serviceberry
Amelanchier utahensis	Utah Serviceberry
Amorpha fruticosa	False Indigo Bush, False Indigo, Desert False Indigo Bush
Arctostaphylos spp.	Manzanita
Artemisia frigida	Prairie Sagewort, Fringed Sage
Artemisia ludoviciana	White Sagebrush, White Sage, Prairie Sage
Artemisia 'Powis Castle'	Powis Castle, Wormwood
Artemisia tridentata	Big Sagebrush, Great Basin Sagebrush
Atriplex canescens	Fourwing Saltbush, Wing-Scale, Chamiso
Berberis aquifolium	Holly-Leaved Barberry, Oregon Grape
Berberis fremontii	Fremont's Mahonia, Fremont Barberry
Berberis repens	Creeping Barberry, Creeping Oregon Grape
Buddleja davidii	Orange Eye Butterfly-Bush, Butterfly Bush, Summer Lilac
Caesalpinia gilliesii	Bird-of-Paradise Shrub, Yellow Bird of Paradise, Desert Bird of Paradise
Caragana arborescens	Siberian Peashrub
Caryopteris x clandonensis	Blue Mist
Ceanothus fendleri	Fendler's Ceanothus, Fendler's Buckbrush
Ceanothus greggii	Desert Ceanothus, Mojave Buckbrush
Ceanothus integerrimus	Deer Brush
Cercocarpus ledifolius	Curl-Leaf Mountain Mahogany, Curl-Leaf Cercocarpus
Cercocarpus montanus	Alderleaf Mountain Mahogany, Mountain Mahogany
Cercocarpus montanus var. glaber	Birchleaf Mountain Mahogany
Chaenomeles speciosa	Flowering Quince
Chamaebatiaria millefolium	Desert Sweet, Fernbush
Cotoneaster glaucophyllus	Gray Cotoneaster, Bright Bead Cotoneaster
Cotoneaster horizontalis	Rockspray Cotoneaster, Rock Cotoneaster
Cotoneaster lacteus	Milkflower Cotoneaster, Parney Cotoneaster
Cotoneaster microphyllus	Little-Leaf Cotoneaster, Rockspray Cotoneaster
Elaeagnus pungens	Thorny Olive, Silverberry

Shrub	
Botanical Name	Common Names
Ephedra viridis	Mormon Tea
Ericamoria laricifolia	Turpentine Bush, Larchleaf Goldenweed,
Ericameria laricifolia	Ericameria
Ericameria nauseosa	Rubber Rabbitbrush, Gray Rabbit Brush
Fallugia paradoxa	Apache Plume
Forestiera pubescens var. parvifolia	Stretchberry, Desert Olive
Forsythia x intermedia	Showy Forsythia, Forsythia
Frangula californica	California Buckthorn, Buckthorn
Garrya wrightii	Wright's Silktassel, Silktassel
Gutierrezia sarothrae	Broom Snakeweed, Snakeweed
Holodiscus dumosus	Rockspirea, Mountain Spray
Jasminum nudiflorum	Winter Jasmine
Juniperus spp.	Juniper
Kolkwitzia amabilis	Beautybush
Krascheninnikovia lanata	Winterfat
Lonicera fragrantissima	Sweet Breath of Spring, Winter Honeysuckle
Lonicera tatarica	Tatarian Honeysuckle, Bush Honeysuckle
Maclura pomifera	Osage-Orange
Perovskia atriplicifolia	Russian Sage
Physocarpus monogynus	Mountain Ninebark
Potentilla fruticosa	Shrubby Cinquefoil
Prunus pumila var. besseyi	Western Sandcherry
Prunus tomentosa	Nanking Cherry
Prunus x cistena	Cistena Plum
Purshia mexicana	Mexican Cliffrose, Cliffrose
Pyracantha spp.	Firethorn, Pyracantha
Quercus gambelii	Gambel Oak
Quercus turbinella	Sonoran Scrub Oak, Shrub Live Oak
Rhamnus crocea	Redberry Buckthorn, Hollyleaf Buckthorn
Rhus aromatica	Fragrant Sumac, Gro-Low
Rhus glabra	Smooth Sumac
Rhus trilobata	Skunkbush Sumac, Three Leaf Sumac
Robinia neomexicana	New Mexico Locust
Rosa rugosa	Rugosa Rose
	Catclaw Acacia,
Senegalia greggii	Gregg's Catclaw Acacia,
	Catclaw
Chartium juncaum	Spanish Broom, Rush Broom,
Spartium junceum	Weaver's Broom
Thymus praecox subsp. arcticus	Creeping Thyme

Tree	
Botanical Name	Common Names
Albizia julibrissin	Silk Tree, Mimosa, Nemu Tree
Calocedrus decurrens	Incense Cedar
Cedrus atlantica	Atlas Cedar
Cedrus deodara	Deodar Cedar
Celtis occidentalis	Common Hackberry, Western Hackberry, Nettle Tree
Celtis reticulata	Netleaf Hackberry, Western Hackberry, Canyon Hackberry
Cercis canadensis var. texensis 'Oklahoma'	Oklahoma Redbud
Chilopsis linearis	Desert Willow, Desert Willow 'Warren Jones', Desert Willow 'Lucretia Hamilton'
Chitalpa tashkentensis	Chitalpa
Cotinus coggygria	European Smoketree, Purple Smoke Tree
Crataegus coccinea	Red Haw, Scarlet Hawthorn
Crataegus laevigata	Smooth Hawthorn, English Hawthorn
Cupressus arizonica	Arizona Cypress, Rough-Barked Arizona Cypress
Fraxinus velutina	Velvet Ash, Arizona Ash
Gleditsia triacanthos	Honeylocust, Crucifixion Thorn, Thornless Honeylocust
Juglans major	Arizona Walnut, Arizona Black Walnut, New Mexico Walnut
Koelreuteria paniculata	Golden Raintree, Golden Rain Tree
Malus spp.	Flowering Crabapple
Picea glauca 'Densata'	Black Hills Spruce
Pinus aristata	Bristlecone Pine
Pinus edulis	Two-Needle Pinyon, Pinyon Pine, Nut Pine
Pinus heldreichii	Bosnian Pine
Pinus monophylla	Single-Leaf Pinyon Pine, Single-Needle Pinyon, Nut Pine
Pinus nigra	Austrian Pine
Pinus ponderosa	Ponderosa Pine
Pinus sylvestris	Scots Pine, Scotch Pine
Pistacia chinensis	Chinese Pistache
Prunus emarginata	Bitter Cherry
Prunus padus	European Bird Cherry, Mayday Tree
Prunus serotina	Black Cherry
Prunus virginiana var. demissa	Western Chokecherry
Quercus arizonica	Arizona White Oak

Tree	
Botanical Name	Common Names
Quercus buckleyi	Texas Red Oak
Quercus emoryi	Emory Oak
Quercus lobata	Valley Oak, California White Oak
Quercus macrocarpa	Bur Oak
Quercus virginiana	Live Oak, Southern Live Oak
Rhus typhina	Staghorn Sumac
Robinia pseudoacacia	Black Locust
Robinia x ambigua	Hybrid Locust, Locust
Styphnolobium japonicum	Japanese Pagoda Tree
Ulmus parvifolia	Chinese Elm, Evergreen Elm

Vine		
Botanical Name	Common Names	
Lonicera japonica 'Halliana'	Hall's Honeysuckle	
Parthenocissus inserta	Thicket Creeper, Woodbine	
Parthenocissus quinquefolia	Virginia Creeper, Woodbine	
Parthenocissus tricuspidata	Boston Ivy	

Appendix

A. Relevant Definitions for the Low Water Use and Drought Tolerant Plant List

- Active Management Area: "A geographical area which has been designated ... as requiring active management of groundwater..." (Arizona Revised Statutes Title 45-402.2)
- Cultivars: "A cultivar is a cultivated variety (may be called a horticultural variety). Cultivars are [cultivated and] maintained via human intervention." (Natural Resources Conservation Service)
- **Drought tolerant:** "Drought tolerance or drought dormancy refers to desert plants' ability to withstand desiccation." (Arizona-Sonora Desert Museum)
- Genus: Group of plant species with shared physical characteristics.
 - Taxonomic example: Chlyismia
- **Groundwater:** "Generally, water below the earth's surface but commonly applied to water in fully saturated soils and geologic formations." (Arizona Department of Water Resources)
- Hybrid: "A hybrid is a plant that is a cross between two species. Sometimes this occurs in nature. Other times crosses are made intentionally." (Natural Resources

 Conservation Service)
- Median: "The area between opposing lanes of traffic, excluding turn lanes. Medians in urban and suburban areas can be defined by pavement markings, raised medians, or islands to separate motorized and non-motorized road users." (U.S. Department of Transportation, FHWA-SA-17-064).
- Public rights-of-way: "When used within the context of the real property on which transportation facilities and appurtenances to the facilities are constructed or maintained means the lands or interest in lands within the right-of-way boundaries." (Arizona Revised Statutes Title 28-101.66)

Species: Related plants in a genus with separating characteristics.

- Taxonomic example: Chlyismia cardiophylla

Synonym: Scientific name that was previously used to identify a plant.

B. Additional Resources

The Low Water Use and Drought Tolerant Plant List is a regulatory document; its sole purpose is to identify which plants are allowed in medians and public rights-of-way irrigated with any amount of groundwater within the Prescott Active Management Area.

Some additional resources, educational materials, and plant search engines for supplementary information on the listed plant genera, species, taxonomy, and characteristics are included below:

- <u>Arizona Department of Agriculture Native Plants Law</u> provides plant lists and information regarding use of native plants for landscaping.
- Arizona State University's Virtual Library of Phoenix Landscape Plants by Dr. Chris Martin provides a reliable list of landscaping plants used in Phoenix and other southwestern cities.
- Arizona Municipal Water Users Association's Landscape Plants for the Arizona Desert lists plants for landscaping that are well adapted to conditions in central Arizona. Plants may be found using the advanced search engine function. It includes plant characteristics and water needs.
- Southwest Environmental Information Network's Arizona-New Mexico Chapter lists
 plant information from various institutions (museums, agencies, universities, etc.) across
 the Southwest via its data portal and search engine function.
- The Arboretum at Penn State has a helpful guide to plant nomenclature processes and rules that may aid with botany or landscaping management.
- The Arizona Native Plant Society has a variety of brochures that provide photos and information (landscaping tips, water use, maintenance, etc.) about plants that are native to Arizona desert regions or are non-native but low water use.
- University of Arizona Cooperative Extension Master Gardener County Contacts lists county contacts for the University of Arizona's Cooperative Extension Master Gardener program, emphasizing agriculture and gardening.
- <u>University of Arizona Herbarium</u> is a collection of plant research from across the southwestern United States and northwestern Mexico.
- United States Department of Agriculture Natural Resources Conservation Service Plants
 <u>Database</u> provides standardized, up to date information about plants, including characteristics, images, and native distribution, among other information.

Additionally, visit ADWR's <u>Conservation</u> website, as well as the <u>Arizona Water Facts</u> website, for helpful information on Arizona-friendly landscapes.

C. Request to Modify or Waive the Requirement

Pursuant to the Prescott AMA 5MP sections 5-1110(A)(3) and 6-402(5), the ADWR Director may waive the requirement to exclusively use plants on the LWUPL if the water user demonstrates to the satisfaction of the Director that the plants on the list cannot grow in a publicly owned right-of-way because of high elevation or low light conditions, such as a freeway underpass. Those who wish to request a **waiver** of the list should submit their request in writing or by email to the ADWR Director, including the following information:

- 1. Description of the location of the publicly owned right-of-way
- 2. Map showing the location of the right-of-way and the place where plants will be located
- 3. Botanical and common name of the plant under consideration
- 4. Description of plant's water needs, including references

Additionally, anyone wishing to **add**, **delete**, or **modify** information on the list is encouraged to submit their request in an <u>Application for Modification</u> to the ADWR Director in writing or email.

Waiver and modification requests can be sent to:

Kyle Miller, AMA Director Arizona Department of Water Resources 1110 W. Washington St, Suite 310 Phoenix, AZ 85007 kmiller@azwater.gov



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