SEVEN PRINCIPLES OF LOW WATER LANDSCAPING

1. Plan And Design (see Water Use Zones)

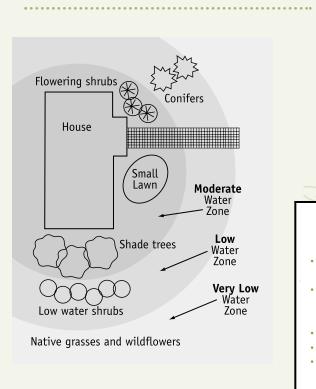
Take the time to plan before you plant. Create different wateruse zones and choose appropriate plants; consider variety, size, texture, color, and bloom time. Water zones are: Moderate—weekly or more irrigation; Low—monthly irrigation; and Very Low—little or no irrigation once established.

2. Design Practical Turf Areas

Turf grasses are more expensive and intensive to maintain than most other landscape plants. Limit the size of lawn areas to an amount you will actually use. Consider using a lowwater alternative like Blue Grama Grass (*Bouteloua gracilis*) instead of thirsty Kentucky Blue Grass (*Poa pratensis*).

WATER USE ZONES

Planting in specific zones can create a water-efficient landscape that is both beautiful and functional.



WATER USE ZONES

3. Work With Your Soil

If necessary, amend your soil with organic matter such as compost or aged manure prior to planting. This will improve root development, and increase water penetration and retention. Be aware that some native plants may not benefit from additions of organic matter; loosening the soil may be all that is needed.

4. Use Appropriate Plants

Choose native plants and plants with low water needs whenever possible. Group plants with similar water requirements, placing them in the appropriate water zone.

5. Cover Your Soil

Covering the soil with mulch, large stones, or decorative wood pieces will provide a protective layer to retain moisture, prevent erosion, reduce weeds, and create a finished look to the garden. Mulch can be organic such as bark, wood chips, and pine needles, or inorganic which includes pea gravel and crushed rock.

WATER USE

Moderate: This is the zone containing plants with the highest water requirements. This zone is often located close to the house in high use and/or high visibility areas. These locations will require more watering and should be limited to focal points, entrances and functional areas.

Low: Plants growing in this zone require infrequent watering. This area may need supplemental water during the dry months.

Very Low: This zone is often located farthest from the house. The most drought-tolerant plants in this zone will require little, if any, supple mental water once established. This are may need additional watering in times of extreme drought.

BOOKS

- Native Plants for High-Elevation Western Gardens. 2003. Busco, J. and N. R. Morin, Fulcrum Publishing.
- Beyond the Ponderosa: Successful Landscape Trees for Higher Elevations in the Southwest. 1998. DeGomez, T. and J. Bailey. Flagstaff Community Tree Board.
- Waterwise Gardening. 1989. Sunset Books, Lane Publishing.
- The Xeriscape Flower Gardener. 1991. Knopf, J. Johnson Books.
- Waterwise Landscaping with Trees, Shrubs & Vines. 1994. Knopf, J. Chamisa Books.
- Xeriscape Gardening. 1992. Ellefson, Stephens & Welsh. MacMillan Publishing.
- Xeriscape Plant Guide. 1996. Denver Water. Fulcrum Publishing.

6. Irrigate Efficiently

Water deeply and less often. Even low water plants can become water hogs when over-watered. Watering in the morning or late at night will reduce evaporative loss. Follow the water schedule established by the City of Flagstaff: even numbered addresses water Wednesday, Friday, and Sunday; odd numbered addresses water Tuesday, Thursday, and Saturday. Water only before 9 AM and after 5 PM.

7. Maintenance

A properly maintained landscape conserves water. Check irrigation systems regularly to make sure they are working correctly, and adjust timers as the seasons change and plants become established. Proper pruning, weeding, and mulch will save water and enhance the beauty of your landscape.

Special Acknowledgement

The Flagstaff Xeriscape Council would like to thank Mar-Elise Hill for generously donating the drawings contained in this brochure.

Flagstaff Xeriscape Council Sponsors

- •Arizona Native Plant Society ANPS@AZNPS.org
- •City of Flagstaff Utilities Department (928) 779-7646 www.flagstaff.az.gov
- •Coconino Community College (928) 527-1222 www.coconino.edu
- •Coconino Cooperative Extension (928) 774-1868 cals.arizona.edu/Coconino
- •Flagstaff Native Plant and Seed (928) 773-9406 www.nativeplantandseed.com
- •The Arboretum at Flagstaff (928) 774-1442 www.thearb.org
- •Warner's Nursery & Landscape Company (928) 774-1983

WEB RESOURCES

- The Arboretum at Flagstaff www.thearb.org
- Xeriscape Colorado! www.xeriscape.org
- Colorado State University Extension Service www.ext.colostate.edu
- Xeriscape Council of New Mexico www.xeriscapenm.com/index.html



Water, Gardens, and Wisdom

Flagstaff homeowners quickly learn how dry summers, cold temperatures, high altitude, and a short growing season create special gardening challenges.

Selecting the right plants will help create beautiful and lasting landscapes that require less maintenance and water.

To help homeowners select plants appropriate to our arid region, the following list of tried and true low water use plants was created with input from local nurserymen, botanists, horticulturists, and landscape professionals.

Although many more plants are available, this list serves as an introduction to home gardeners interested in early success.

These plants were chosen based on the following criteria:

- Commercially available
- Ecologically appropriate
- Low water use
- · Low maintenance
- Survivability
- Cold hardy
- Color and texture



Flagstaff Fabulous Plants

Sun loving, low-water plant list. It's not enough to wish for rain - plan anead!

	COMMON NAME	BOTANICAL NAME	HEIGHT	WIDTH	SUN	ZONE	INTEREST / NOTES
SHRUBS/VINES TREES	Amur Maple	Acer ginnala	15-20 ft	15-20 ft	$\circ \bullet$	L - M	Hardy, small tree or large multi-stemmed shrub with great fall color; best in partial sun
	Rocky Mountain Juniper	Juniperus scopulorum	20-30 ft	20-30 ft		VL	Native evergreen that is easily transplanted; good windbreak
	Crabapple	Malus spp.	10-30 ft	20 ft		L - M	Deciduous tree grown for attractive spring color; flower buds may freeze in spring
	Colorado Blue Spruce	Picea pungens	to 100 ft	to 40 ft	00	L	Evergreen, pyramid-shaped tree; not for dry, windy sites; dwarf sp. subject to windburn
	Pinyon Pine	Pinus edulis	20-30 ft	15 ft	0	VL	Bushy, evergreen tree that is extremely drought tolerant; edible seeds; resinous
	Ponderosa Pine	Pinus ponderosa	60-100ft	25-30ft	0	VL - L	Large evergreen tree common to Flagstaff; very hardy and drought tolerant
	Gambel Oak	Quercus gambelii	20-40 ft	25-30ft 15-20 ft		VL - L VL - L	Slow growing deciduous tree with beautiful fall foliage; thicket forming
	Black Locust	Robinia pseudoacacia	40-50 ft	25-30 ft			Deciduous shade tree that is drought tolerant once established; wind tolerant
		Amelanchier utahensis			$\bigcirc \bigcirc$	L VL - L	Deciduous, twiggy shrub with distinct white bark and red berries in the spring
	Utah Serviceberry		12-15 ft	10-15 ft	$\bigcirc 0$	VL - L VL	
	White Sage Brush	Artemisia ludoviciana	2-4 ft	2-4 ft	0		Small shrub grown for its silvery-white, aromatic foliage rather than its flowers
	Mountain Mahogany	Cercocarpus spp.	6-12 ft	6-12 ft	0	VL	Slow growing native shrub that is semi-evergreen to deciduous depending on species
	Fernbush	Chamaebatiaria millefolium	4-6 ft	4-6 ft	0	VL - L	Semi-evergreen to deciduous shrub with fragrant white flowers that attract butterflies
	Rabbitbrush	Ericameria nauseosa	2-5 ft	3-5 ft	0	VL	Fast growing evergreen shrub with plumes of yellow flowers in fall; drought tolerant
	Apache Plume	Fallugia paradoxa	4-6 ft	3-6 ft	0	VL - L	Deciduous to semi-evergreen shrub; fuzzy, pink seed heads appear all summer
ž	Virginia Creeper	Parthenocissus inserta	3-15 ft	spreading	\bigcirc \bigcirc	L	Deciduous vine that makes a good groundcover; scrambles rather than climbs
Ë	Chokecherry	Prunus virginiana	20-30 ft	6-30 ft	0	L - M	Large deciduous shrub or small tree with red to black berries
o	Three-leaf Sumac	Rhus trilobata	3-8 ft	4-6 ft	\bigcirc \bigcirc	L	Deciduous shrub with beautiful fall foliage; very drought tolerant
	Currant (Golden/Wax)	Ribes spp.	3-6 ft	3-6 ft	\bigcirc \bigcirc	L	Deciduous shrub with spring flowers; height dependant on species
	New Mexico Locust	Robinia neomexicana	10-15 ft	10-15 ft		VL	Spiny, deciduous shrub that forms dense thickets; showy pink, pea-like flowers
	Arizona Rose	Rosa woodsii	3-6 ft	spreading	\circ	VL - L	Fast growing deciduous shrub; fragrant, pink flowers in spring and summer; red fruit
GRASSES/ACCENTS	Agave	Agave parryi	12-20 in	18 in	0	L	Succulent accent plant with spectacular blooms
	Blue Grama	Bouteloua gracilis	6-12 in	spreading	0	VL - L	Warm season native grass; low traffic turf alternative
	Arizona Fescue	Festuca arizonica	2-3 ft	2 ft	\circ	VL - L	Cool season bunch grass with dense, thin blades
¥/s	'Blue' Fescue	Festuca ovina 'Glauca'	8-12 in	12 in	\bigcirc \bigcirc	L	Ornamental, dense bunch grass with steel blue, needle-like foliage; many cultivars
Ë	'Karl Foerester' Grass	Calamagrostis x acutiflora	4-5 ft	2 ft	ŎŎ	L - M	Fast-growing, clump-forming, upright grass topped with tawny, fluffy flower heads
AS:	Little Bluestem	Schizachyrium scoparium	2-4 ft	2-3 ft	\bigcirc \bigcirc	L	Warm season, perennial bunch grass with reddish fall color that persists through winter
<u>2</u>	Banana Yucca	Yucca baccata	2-2.5 ft	3 ft	0	VL	Accent plant with sword-shaped leaves; requires well-drained soil
Ü	Western Yarrow	Achillea millefolium	6-24 in	spreading	\circ	L	Spreading perennial with fern-like foliage and white blooms; many colored cultivars
	Licorice Mint	Agastache rupestris	18-30 in	18 in	\circ	VL - L	Licorice scented perennial with light orange flowers in summer; attracts hummingbirds
	Pussytoes	Antennaria spp.	3 in	spreading	00	L	Excellent small area groundcover with silvery foliage; some species require shade
	Butterfly Milkweed	Asclepias tuberosa	15-18 in	15-18 in	0	L	Upright perennial with showy yellow to orange flowers in summer; attracts hummingbirds
RS	Wine Cups	Callirhoe involucrata	8 in	24-36 in	Ô	L	Spreading perennial with wine-colored flowers that bloom all summer long
ΚĒ	Buckwheats	Eriogonum spp.	3-18 in	12-24 in	Ö	VL - L	Mat-forming group of perennials; flower stalks rise above foliage; height and color vary
Ö	Red Dome Blanketflower	Gaillardia pinnatifida	18 in	24 in	0	VL	Easy-care perennial with red disk flowers surrounded by yellow ray flowers
ğ	Prairie Smoke	Geum triflorum	4-12 in	spreading	\circ	L	Groundcover that blooms in spring; feathery seed heads persist throughout summer
FLOWERS/GROUNDCOVERS	Showy Goldeneye	Heliomeris multiflora	3 ft	3 ft		VL - L	Bushy, long-lived perennial; abundant yellow sunflowers appear summer through fall
	Blue Flax	Linum lewisii	2 ft	2 ft	\circ	VL - L	Low-maintenance perennial; blue flowers open each morning
	Showy Four-O'Clock	Mirabilis multiflora	24 in	30 in		VL - L VL	Mounding perennial with large, magenta flowers; thrives in harsh climates
Ŕ	Primrose	Oenothera spp.	30-48 in	12-24 in	0	VL - L	Annual, biennial or perennial depending on species; large flowers attract butterflies
Š	Penstemon	Penstemon spp.	4-48 in	varies		VL - L VL - L	Group of over a dozen species, all with tube-shaped flowers; tolerant of poor soils
FL	Silver Cinquefoil	**					
		Potentilla hippiana	6-12 in	24 in	0	VL - L	Low-growing perennial with silver foliage and yellow, rose-like flowers
	Scarlet Cinquefoil	Potentilla thurberi	18-30 in	24 in	\bigcirc \bigcirc	L - M	Long-blooming perennial with deep red flowers held in loose clusters that attract bees
	Broom Groundsel	Senecio spartioides	1-3 ft	2 ft	0	L	Numerous, showy yellow flowers
	Globe Mallow	Sphaeralcea coccinea	12 in	12 in	0	VL - L	Long-blooming perennial for hot, sunny sites; attracts butterflies, bees and hummingbirds

M = Moderate Water

L = Low Water

VL = Very Low Water

Full Sun

Part Sun / Part Shade