

***WATER CONSERVING
PLANTS
FOR
SALT LAKE CITY***

Prepared by

The Planning Division of the Salt Lake City Community & Economic Development Department

*Salt Lake City, Utah
September 1995
Updated May 2001*

Acknowledgements

We wish to thank the following individuals and agencies who assisted in the compilation of this list:

Robert Desmond	Utah Chapter, ASLA
Richard Hildreth	Red Butte Garden & Arboretum
Fred Liljegren	U.S. Bureau of Reclamation
Steve Linde	Utah Nursery & Landscape Association
Susan Meyer	Research Ecologist, USDA Forest Service; Chair of the Board of Directors for the Utah Native Plant Society
Larry Rupp	Utah State Horticulturist
Jan Striefel	Landmark Design, Inc.
John Swain	Salt lake City Parks
Bill Rutherford	Salt lake City Urban Forester
S.L.C. Planning:	Brent Wilde
	Cheri Coffey
	Doug Dansie
	Craig Hinckley

LANDSCAPE PLANTS FOR WATER CONSERVATION

Introduction

Most home gardens, as well as much of the commercial and industrial landscaping in Salt Lake City, have been lushly developed with water intensive non-native plants. This is due in part to the fact that Salt Lake City has historically enjoyed a generous water supply, thanks to the foresight of early settlers in the development of irrigation projects, and a cultural predisposition toward a philosophy of landscape design unrestricted by water availability. However, as Salt Lake City's population steadily increases, there will be a corresponding increase in demand on the City's water resources. One way to reduce demand is to encourage landscape design which is more compatible with the indigenous climate.

In order to make the transition to more environmentally compatible landscape patterns, while still maintaining Salt Lake's legacy as an "oasis in the desert", it is important to more widely use native and naturalized plants which are capable of providing shade and beauty with minimal water use. Many of these plants are as aesthetically pleasing as introduced varieties (often more so), but have not been widely planted in the urban landscape because of limited availability at local nurseries and the general public's unfamiliarity with their landscape potential.

In April of 1995, Salt Lake City adopted a new Zoning Ordinance which established certain standards for landscaping and encouraged the use of "drought tolerant" plants. The intent of the drought-tolerant section of the Zoning Ordinance, and the lists of drought tolerant plants below, is to encourage creativity in landscape design through the use of drought tolerant plant species, to recognize the value of these climate-compatible species, to encourage their more widespread use, fuel their demand in the retail market, and thereby reduce the seasonal strain on Salt Lake City's water delivery system.

Water Conserving Landscape Program

In addition to using drought tolerant plants, a comprehensive water-conserving landscape program should also include several other elements. In *"Urban and Community Forestry, a Guide for the Interior Western United States"*, seven broad, fundamental, elements are described.

1. **Planning and Design.** In planning a landscape, the ecological needs of plants and plant communities must be integrated with the micro climate of the site in which they will be placed. Landscape designers must also accept that there is a "human ecology" of water use in landscapes. That is, the intensity of human activity dictates, to some degree, landscape water use.

2. Soil Improvement. Urban soils do not always contain all the physical and chemical properties necessary for healthy plant growth and development. Soil improvements are often needed in order to correct poor water infiltration, percolation, and drainage, while still providing adequate water holding capacity and nutritional balance of the soil.

3. Efficient, Zoned Irrigation. Matching the amount of water supplied to each plant with that plant's water requirement is the most efficient way to irrigate. To eliminate waste from over-watering and runoff, plants should be grouped according to their water needs. Zoned irrigation systems should then be designed to deliver the appropriate amount of water to these plant groups.

4. Limited Turf Areas. Turf should be limited to high use areas in the landscape and should be separated from other plantings which have lower water needs. In less frequented areas of the site, drought tolerant species with poor resistance to traffic may be planted. Water use may also be reduced by replacing turf grass in high traffic areas with patios, decks, gravel walks, or other appropriate materials.

5. Use of Mulch. The function of mulch is to buffer soils against climatic extremes. In summer mulch reduces soil heating, slows water loss from evaporation, and reduces weed growth. In winter, mulch protects shallow roots from damage by preventing the daily freeze/thaw cycle and drying of soils.

6. **Use of Low Water Demand Plants.** Many beautiful and functional plants are available that thrive with natural precipitation or only small amounts of supplemental water. The range of plant with low water requirements is now wide enough to permit selecting for function, beauty, and seasonal interest. However, as with all plant selections and planting, care must be taken to match specific needs of plants to the environmental conditions and the intensity of human activity at the planting site.

7. Appropriate Maintenance. Low maintenance is not no maintenance. Landscaping with water-conserving plants, coupled with sound maintenance, produces water and energy savings and environmentally adapted landscapes that are aesthetically pleasing.

Integrating these seven elements in the creative planning, development, and maintenance of landscapes has been shown to conserve water and reduce annual maintenance costs without sacrificing function or beauty.

The Plant Lists

The following lists of trees, shrubs, herbaceous perennials, ornamental grasses, vines, and groundcovers have been compiled to serve as a guide to the public for selection of landscape plants which have low water requirements. It is also intended to aid Salt Lake City in the evaluation of landscape plans and, specifically, to clarify standards contained in Chapter 24 of the Salt Lake City Zoning Ordinance.

While every effort has been made to make these lists as complete as possible, they should not be considered definitive. As additional information becomes available over time it is likely that plants may be added, or removed, from this list. To this end, input from individuals or organizations involved in the landscape industry, as well as members of the general public, is welcomed.

Explanation Of Column Headings

Water Zones identify the minimum amount of water a plant needs in order to survive after it is established in the landscape. It should be understood that, while plants will survive with the amounts of water indicated, some plants may not maintain their best appearance without some additional water. It is assumed that the establishment period will be a minimum of two years during which more frequent supplemental water may be needed. Water zones, as used in this list, are defined as follows:

- 0** No supplemental water is required after plants are established.
- 1** At least 1 inch of supplemental water per month may be required after plants are established.
- 2** At least 1 inch of supplemental water every two weeks may be required after plants are established.

Plants requiring more than 1 inch of supplemental water every two weeks are not considered to be “water conserving” or “drought tolerant” plants.

Botanical name is the scientific name which identifies plants by separating them into families, genus, species, and varieties. Each plant has only one botanical name, making it unique from any other plant. In this list the botanical name has been abbreviated to include only the genus, species, and, if necessary, the variety. The genus followed by “sp.”, indicates that there are several different species or varieties of a plant which all have similar characteristics.

While a plant has only one botanical name it may have several **common names**. In compiling this list an attempt has been made to determine the most widely used common names.

Mature size is considered to be the average size a plant could be expected to grow with proper care and the amount of water indicated. Actual size of a given plant at a given location may vary.

Minimum size at planting is the size required by the Salt Lake City Zoning Ordinance, Chapter 24, for trees and shrubs which are planted for the purpose of establishing a visual screen. A blank in this column indicates that either there is no specific requirement or that a

shrub is not generally used as a hedge or screen. When the terms “pot”, “container”, or “caliper” are used to describe minimum size at planting, the established American Standard for Nursery Stock shall apply. That is:

- “All container grown (deciduous or conifer) shrubs shall be healthy, vigorous, well-rooted and established in the container in which they are sold. They shall have tops which are of good quality and are in a healthy growing condition.”

“An established container grown (deciduous or conifer) shrub shall be a (deciduous or conifer) shrub transplanted into a container and grown in that container sufficiently long for the new fibrous roots to have developed so that the root mass will retain its shape and hold together when removed from the container.”

- Container size may be converted to minimum height/spread as follows:

2 gallon	=	12” to 15” height or spread
5 gallon	=	18” to 24” height or spread

- “Caliper”, for the purpose of this list, is defined as the diameter of the trunk measured 6 inches above ground level.

Maximum spacing is the spacing necessary to create a “massing” effect, to create a hedge or screen, or, in the case of trees, to eventually create a continuous tree canopy.

The **comments** column contains qualifying statements and/or unique cultural requirements that affected the determination of water zones. This column has also been used in some cases to provide additional general information about a plant.

LIST OF WATER-CONSERVING PLANTS

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
VINES & GROUND COVERS						
0	<i>Euphorbia myrsinites</i>	Spurge	12" x 24"		12" o.c.	Sap may cause rash in some people. May be invasive.
0	<i>Mahonia repens</i>	Creeping Oregon Grape	18"		3' o.c.	Utah Native
0 - 1	<i>Juniperus sp.</i>	Juniper (many species and varieties)	4"-24" x 8'-20'		4' o.c.	Utah Native (some)
0 - 1	<i>Parthenocissis sp.</i>	Virginia Creeper, Boston Ivy	climbing vine		N/A	
1	<i>Campsis radicans</i>	Trumpet Vine	climbs to 40'		N/A	
1	<i>Cerastium tomentosum</i>	Snow In Summer	8" x 36"		12" o.c.	
1	<i>Convallaria majalis</i>	Lily-Of-The-valley	8" x spreading		18"	Partial shade.
1	<i>Fragaria sp.</i>	Wild Strawberry	forms 8" mat		12" o.c.	Utah Natives <i>F. vesca</i> and <i>F. virginiana</i>
1	<i>Genista pilosa</i>	Vancouver Gold Genista	12" x 6'		36" o.c.	
1	<i>Helianthemum nummularium</i>	Sunrose, Rockrose	8" x 36"		24"	
1	<i>Lonicera japonica</i>	Japanese Honeysuckle	12" x 15'		18" o.c.	
1	<i>Polygonum aubertii</i>	Silverlace Vine	forms 8" mat		18" o.c.	
1	<i>Rhus aromatica</i>	Grow Low Sumac	24" x 4'		3' o.c.	Utah Native

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
1	Rosa sp.	Spreading Rose	12" x 10'		3' o.c.	Has thorns. Utah Natives include R. woodsii, R. nutkana
1	Sedum sp.	Utah Green Sedum, Goldmoss Sedum, Green Stonecrop, Dragon's Blood Sedum	forms 2" to 12" mat		12" o.c.	Utah Natives include S. debile, S. lancoelatum, S. rhodent, S. rosea,
1	Sempervivum tectorum	Hens And Chicks	forms 4" mat		12" o.c.	
1	Vinca major	Periwinkle	forms 12" mat		12" o.c.	
1 - 2	Clematis 'Hybrids'	Clematis	climbs to 10'		N/A	Water zone varies with variety. Some may be invasive. Utah Natives include C. ligusticifolia, C. hirsutissima. C. occidentalis
1 - 2	Cotoneaster sp.	Cotoneaster	6" x 10'		3' o.c.	Water zone varies with variety
1 - 2	Vitis sp.	Grapes	vine		6' o.c.	
2	Aegopodium podagraria	Bishop's Weed	forms 18" mat		18" o.c.	Shade.
2	Arabis caucasica	Rock Cress	forms 6" mat		12" o.c.	
2	Arctostaphylos uva-ursi	Kinnikinnick	12" x 15'		24" o.c.	Utah Native
2	Delosperma cooperi	Delosperma, Ice Plant	5" x 24"		18" o.c.	
2	Delosperma nubigenum	Yellow Ice Plant	1" x 36"		18" o.c.	
2	Euonymus fortunei	Winter Creeper	forms 8" mat		18" o.c.	
2	Galium odoratum	Sweet Woodruff	forms 8" mat		12" o.c.	Shade.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
2	Hedera helix	English Ivy	12" x spreads, climbing		12" o.c.	Shade.
2	Hypericum calcinum	Aaron's Beard, St. Johnswort	forms 18" mat		18" o.c.	
2	Pachistima canbyi	Mountain Lover	forms 10" mat		18" o.c.	
2	Pachysandra terminalis	Pachysandra	forms 8" mat		12" o.c.	Shade.
2	Thymus sp.	Woolly Thyme, Pink Creeping Thyme	forms 3" to 6" mat		12" o.c.	
2	Vinca minor	Dwarf Periwinkle	forms 6" mat		12" o.c.	Shade.
2	Wisteria	Wisteria	vine		N/A	

ORNAMENTAL GRASSES

0	Elymus glaucus	Blue Oat Grass	24" x 24"		24" o.c.	Utah Native
0	Oryzopsis hymenoides	Indian Rice Grass	12" - 18" H		18" o.c.	Utah Native
0	Pennisetum ruppelii	Fountain Grass	H - 4'		36" o.c.	
1	Calamagrostis x acutiflora 'Stricta'	Feather Reed Grass	4' x 4'		36" o.c.	
1	Festuca ovina glauca	Blue Sheep Fescue	H - 14"		N/A	Utah Native
1	Miscanthus sinensis 'gracillimus'	Maidenhair Grass	H - 5'-6'		36" o.c.	
1	Stipa comata, Stipa speciosa	Needlegrass, Needle and Thread Grass	H - 12"		N/A	Utah Native

HERBACEOUS PERENNIALS

0	Achillea millefollium.	Yarrow (many varieties)	36" x 24"		24" o.c.	Utah Native
---	------------------------	-------------------------	-----------	--	----------	-------------

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
0	<i>Antennaria rosea</i>	Pink Pussy Toes	6" x 12"		12" o.c.	Utah Native
0	<i>Eriogonum umbellatum</i>	Sulphur Flower	12" x 12"		N/A	Utah Native
0	<i>Ratibida columnaris</i>	Prairie Coneflower, Mexican Hat	24" x 12"		N/A	
0	<i>Viguiera multiflora</i>	Showy Goldeneye	18" x 18"		N/A	Utah Native
0 - 1	<i>Gaillardia</i> sp.	Blanket Flower, Firewheel	varies		24" o.c.	Utah Natives include <i>G. spathulata</i> , <i>G. parreyi</i> , <i>G. aristata</i> , <i>G. pinnatifida</i>
0 - 1	<i>Linum kingii</i> , <i>Linum lewisii</i>	Golden Flax, Perennial Flax, Native Blue Flax	18" x 12"		12" o.c.	Utah Native
0 - 1	<i>Oenothera</i> sp.	Evening Primrose	8" x 18"		18" o.c.	Utah Natives include <i>O. caepitosa</i> , <i>O. paelide</i> , <i>O. howardii</i>
0 - 1	<i>Penstemon</i> sp.	Firecracker Penstemon, Palmer Penstemon, Shrublet Penstemon, Wasatch Penstemon	18" x 18"		18" o.c.	Most are Utah natives
0 - 2	<i>Artemisia</i> sp.	Wormwood, Sagebrush	up to 36" x equal spread		36" o.c.	Water zone varies with variety. Utah Native.
0 - 2	<i>Aster</i> sp.	Alpine Aster, Hardy Aster, Michaelmas Daisy, Pacific Aster	up to 48" x equal spread		18" o.c.	Water zone varies with variety. Many are Utah Natives.
0 - 2	<i>Geranium</i> sp.	Cranesbill, Wild Geranium	18" x 18"		12' o.c.	Water zone varies with variety. <i>G. viscosissimum</i> is Utah native.
0 - 2	<i>Geum</i> sp.	Geum, Grecian Rose, Prairie Duster	12" x 12"		12" o.c.	Water zone varies with variety. <i>G. triflorum</i> is Utah native.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
0 - 2	Lupinus sp.	Lupine	to 5' x 36"		24" o.c.	Water zone varies with variety. Some are Utah natives.
0 - 2	Rudbeckia sp.	Black Eyed Susan, Gloriosa Daisy, Dwarf Rustic Coneflower	36" x 24"		24" o.c.	Water zone varies with variety. R. occidentalis is Utah native.
0 - 2	Viola sp.	Violet, Pansy	6" x 6"		12" o.c.	Shade, Water zone varies with variety
1	Aesclepias tuberosa	Butterfly Flower	24" x 24"		24" o.c.	Utah native.
1	Anaphalis margaritacea	Pearly Everlasting	36" x 24"		18" o.c.	Utah native.
1	Anemone pulsatilla	Pasque Flower	12" x 12"		12" o.c.	
1	Bulbs	Spring Flowering Bulbs	varies		varies	
1	Callirhoe involucrata	Poppy Mallow	12" x 12"		12" o.c.	
1	Centaurea sp.	Bachelor Button	up to 24" x equal spread		24" o.c.	
1	Centranthus ruber	Keys Of Heaven, Jupiter's Beard, Red Valerian	36" x 36"		24" o.c.	
1	Corydalis lutea	Yellow Corydalis	up to 15" x equal spread		12" o.c.	Shade.
1	Echinacea purpurea	Purple Coneflower	36" x 24"		24" o.c.	
1	Herniaria glabra	Green Carpet, Rupture Wort	3" x spreading		12" o.c.	Evergreen. Foliage turns bronze in winter.
1	Iris missouriensis	Missouri Iris	24" x 24"		18" o.c.	Utah native.
1	Iris x germanica	German Bearded Iris	36" x varies		18" o.c.	
1	Kniphofia uvaria	Red Hot Poker	36" x 24"		24" o.c.	

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
1	<i>Lavandula angustifolia</i>	English Lavender	15" x 15"		12" o.c.	
1	<i>Linaria purpurea</i>	Toad Flax	10" x 10"		12" o.c.	
1	<i>Monarda didyma</i>	Bee Balm	36" x 36"		24" o.c.	
1	<i>Papaver</i> sp.	Poppy, Oriental Poppy	to 4' x equal spread		24" o.c.	
1	<i>Perovskia atriplicifolia</i>	Russian Sage	36" x 36"		24" o.c.	
1	<i>Polemonium caeruleum</i>	Jacob's Ladder	24" x 12"		12" o.c.	Shade.
1	<i>Santolina</i> sp.	Lavender Cotton	2' x 3'		3' o.c.	
1	<i>Sedum</i> sp.	Sedum (many species & varieties)	2" – 18" high, spreads		12" o.c.	Many Utah natives.
1	<i>Zauschneria californica</i>	Hummingbird Fuchsia	24" x 24"			Utah native.
2	<i>Alcea rosea</i>	Hollyhock	6' x 3'		24" o.c.	
2	<i>Alyssum saxatilis</i>	Basket Of Gold	12" x 12"		12" o.c.	
2	<i>Anacyclus depressus</i>	Mount Atlas Daisy	forms 6" mat		12" o.c.	
2	<i>Aquilegia</i> sp.	Columbine	24" x 18"		12" o.c.	Shade. Some Utah natives.
2	<i>Armeria maritima</i>	Common Thrift	12" x 12"		12" o.c.	
2	<i>Baptisia australis</i>	Blue False Indigo	up to 6' tall		36" o.c.	
2	<i>Bergenia cordifolia</i>	Bergenia, Saxifrage	12" x 12"		12" o.c.	
2	<i>Campanula</i> sp.	Carpathian Harebell, Serbian Bellflower, Bluebells Of Scotland, and others	6" to 18" x 12" to 24"		12" o.c.	Shade. Utah natives include <i>C. rotundifolia</i> , <i>C.</i> <i>parreyi</i>
2	<i>Cheiranthus cheiri</i>	Wallflower	24" x 24"		18" o.c.	
2	<i>Chrysanthemum maximum</i>	Shasta Daisy	12"-36" x 24"		18" o.c.	

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
2	<i>Coreopsis grandiflora</i>	Coreopsis, Pot Of Gold	24" x 24"		12" o.c.	
2	<i>Dianthus</i> sp.	Hardy Carnation, Sweet William, Maiden Pinks	up to 20" high		12" o.c.	
2	<i>Epimedium x rubrum</i>	Barrenwort	12" x 12"		12" o.c.	Shade.
2	<i>Eryngium alpinum</i>	Blue Sea Holly	24" x 12"		12" o.c.	
2	<i>Euphorbia epithymoides</i>	Cushion Flower, Spurge	18" x 18"		12" o.c.	
2	<i>Gaura lindheimeri</i>	Gaura, Whirling Butterflies	up to 4' high		12" o.c.	
2	<i>Gypsophila paniculata</i>	Baby's Breath	36" x 36"		24" o.c.	
2	<i>Hemerocallis</i> hybrid	Daylily	15" x 12"		18" o.c.	
2	<i>Heuchera sanguinea</i>	Coral Bells	12" x 12"		12" o.c.	
2	<i>Hibiscus moscheutos</i>	Perennial Hibiscus	6' x 4'			
2	<i>Hosta</i> sp.	Plantain Lily	24" x 24"		24" o.c.	Shade.
2	<i>Iberis sempervirens</i>	Candytuft	12" x 12"		12" o.c.	
2	<i>Iris sibirica</i>	Siberian Iris	36" x varies		18" o.c.	
2	<i>Liatris spicata</i>	Gayfeather	36" x 24"		18" o.c.	
2	<i>Limonium latifolium</i>	Statice, Sea Lavender	24" x 36"		24" o.c.	
2	<i>Lychnis</i> sp.	Maltese Cross, Rose Campion	36" x 24"		18" o.c.	
2	<i>Paeonia hybrida</i>	Peony	36" x 24"		18" o.c.	
2	<i>Phlox subulata</i>	Creeping Phlox	6" high, spreads		12" o.c.	
2	<i>Platycodon grandiflorus</i>	Balloon Flower	24" x 12"		12" o.c.	
2	<i>Salvia</i> sp.	Salvia	30" x 24"		18" o.c.	
2	<i>Saponaria ocymoides</i>	Rock Soapwort	12" x 36"		12" o.c.	

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
2	<i>Solidago canadensis</i>	Goldenrod	36" x 24"		18" o.c.	Utah native.
2	<i>Stachys byzantina</i>	Lambs Ears	18" x 18"		18" o.c.	
2	<i>Teucrium chamaedrys</i>	Germander	1' x 2'		2' o.c.	
2	<i>Thymus</i> sp.	Thyme (many varieties)	1" to 10" x equal spread		12" o.c.	
2	<i>Tradescantia virginiana</i>	Spiderwort	36" x 24"		18" o.c.	Shade.
2	<i>Verbena</i> sp.	Verbena	12" to 36" x equal spread		12" o.c.	
2	<i>Veronica</i> sp.	Speedwell	18" x 12"		12" o.c.	

SHRUBS						
0	<i>Amorpha canescens</i>	Lead Plant	6' x			
0	<i>Arctostaphylos patula</i>	Greenleaf manzanita	3' x 6'			Evergreen. Utah native.
0	<i>Artemisia tridentata</i>	Big Sage, Sagebrush	4' x 4'			Utah native.
0	<i>Atriplex canescens</i>	Fourwing Salt Bush	3' x 4'			Evergreen. Utah native.
0	<i>Atriplex gardneri</i>	Gardner Salt Bush	12" x 4'			Evergreen. Utah native.
0	<i>Caragana arborescens</i>	Siberian Pea Shrub	10' x 6'	5 gal. container	5' o.c.	
0	<i>Cercocarpus ledifolius</i>	Curleaf Mountain Mahogany	10' x 8'	5 gal. container	6' o.c.	Evergreen. Utah native.
0	<i>Cercocarpus montanus</i>	True Mountain Mahogany	6' x 6'	5 gal. container	5' o.c.	Utah native.
0	<i>Chamaebatiaria millifolium</i>	Fernbush	4' x 4'	2 gal. container	4' o.c.	Utah native.
0	<i>Chrysothamnus nauseosus</i>	Rubber Rabbitbrush	4' x 4'	2 gal. container	4' o.c.	Utah native.
0	<i>Collutea arborescens</i>	Bladdersenna	6' x 6'	1 gal. container	5' o.c.	
0	<i>Cowania mexicana</i>	Cliff Rose	5' x 5'			Has thorns, evergreen. Utah native.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
0	<i>Ephedra viridis</i>	Mormon Tea	3' x 4'			Evergreen. Utah native.
0	<i>Fallugia paradoxa</i>	Apache Plume	4' x 8'	5 gal. container	5' o.c.	Utah native.
0	<i>Forestiera neomexicana</i>	New Mexico Privet	6' x 4'	5 gal. container	4' o.c.	Evergreen. Utah native.
0	<i>Holodiscus dumosus</i>	Rock Spray Spiraea	4' x 3'			Utah native.
0	<i>Juniperus chinensis</i>	Phitzer Juniper, Blue Point Juniper, & other upright varieties	8' x 10'	5 gal. container	5' o.c.	Evergreen
0	<i>Juniperus sabina</i>	Tam Juniper (Many varieties)	3' x 4'			Evergreen
0	<i>Juniperus communis</i>	Common Juniper	2' x 5'			Evergreen. Utah native.
0	<i>Mahonia fremonti</i>	Fremont Barberry	6' x 8'			Limited availability, evergreen. Utah native.
0	<i>Peraphyllum ramosissimum</i>	Sqaw Apple	6' x 6'	5 gal. container	4' o.c.	Utah native.
0	<i>Prunus besseyi</i>	Western Sand Cherry	5' x 5'	5 gal. container	4' o.c.	
0	<i>Prunus tomentosa</i>	Nanking Cherry	6' x 4'	5 gal. container	5' o.c.	
0	<i>Purshia tridentata</i>	Antelope Bitterbrush	6' x 6'	5 gal. container	5' o.c.	Utah native.
0	<i>Rhus glabra</i>	Smooth Sumac	10' x 8'	5 gal. container	6' o.c.	Utah native.
0	<i>Rhus trilobata</i>	Oakbrush Sumac, Skunkbrush	6' x 5'	5 gal. container	5' o.c.	Utah native.
0	<i>Rosa rugosa</i>	Rugosa Rose	6' x 6'	5 gal. container	4' o.c.	Has thorns.
0	<i>Shepherdia sp.</i>	Buffaloberry	10' x 6'	5 gal. container	5' o.c.	Utah native.
0	<i>Yucca sp.</i>	Yucca	4' x 4'		.	Evergreen. Some are Utah natives.
0 - 1	<i>Amelanchier alnifolia</i>	Saskatoon Serviceberry	4'-8' x 6'	5 gal. container	5' o.c.	Utah native. May be other suitable species

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
0 - 1	Amelanchier utahensis	Utah Serviceberry	4'-8' x 6'	5 gal. container	5' o.c.	Utah native. May be other suitable species
0 - 1	Rosa foetida	Copper Rose	5' x 5''	5 gal. container	4' o.c.	Has thorns.
1	Amorpha fruticosa	False Indigo	6' x			
1	Aronia melanocarpa	Black Chokeberry	8' x 6'			
1	Caragana pygmaea	Pygmy Pea Shrub	4' x 6'			
1	Caryopteris clandonensis	Blue Mist Spiraea	2' x 2'			
1	Chaenomeles japonica	Flowering Quince	5' x 6'	5 gal. container	4' o.c.	
1	Cotoneaster acutifolia	Peking Cotoneaster	8' x 6'	5 gal. container	4' o.c.	
	Cotoneaster divaricata	Spreading Cotoneaster	6' x 8'		5' o.c.	
1	Cotoneaster apiculatus	Cranberry Cotoneaster	3' x 4'			
	Cotoneaster horizontalis	Rock Cotoneaster,				
1	Cytisus sp.	Broom	4' x 4'	2 gal. container	4' o.c.	
1	Forsythia sp.	Forsythia	6' x 4'	5 gal. container	4' o.c.	
1	Genista lydia	Lydia Broom	2' x 4'			
1	Hibiscus syriacus	Confederate Rose, Rose Of Sharon	8' x 8'	5 gal. container	5' o.c.	
1	Holodiscus discolor	Ocean Spray	4' x 3'			
1	Kolkwitzia amabilis	Beauty Bush	8' x 6'	5 gal. container	5' o.c.	
1	Lonicera sp.	Zabelli Honeysuckle, Tatarian Honeysuckle	10' x 8'	5 gal. container	4' o.c.	
1	Mahonia aquifolium	Oregon Grape	5' x 6'	5 gal. container	4' o.c.	Evergreen. Can be invasive.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
1	Philadelphus sp.	Mockorange, Sweet Mockorange (dwarf varieties also available)	8' x 10'	5 gal. container	5' o.c.	P. microphyllus is Utah native.
1	Physocarpus sp.	Ninebark	4' x 4'	5 gal. container	4' o.c.	Utah native.
1	Pinus mugo pumilo	Dwarf Mugo Pine	4' x 4'	5 gal. container	4' o.c.	
1	Potentilla fruticosa	Shrubby Cinquefoil	3' x 3'			Utah native.
1	Rhamnus cathartica	Tallhedge Buckthorn	8' x 8'	5 gal. container	4' o.c.	May have thorns.
1	Rhus typhina	Staghorn Sumac	12' x 10'	5 gal. container	8' o.c.	
1	Ribes sp.	Alpine Currant, Golden Currant	4' x 4'	5 gal. container	4' o.c.	R. aureum, among others, is Utah native.
1	Rosa woodsii	Woods Rose	4' x 4'	5 gal. container	4' o.c.	Has thorns. Utah native.
1	Rubus deliciosus	Colorado Thimbleberry	4' x 4'	5 gal. container	4' o.c.	
1	Sambucus sp.	Elderberry	8' x 8'			Utah native.
1	Symphoricarpos albus	Common Snowberry	4' x 5'			
1	Syringa vulgaris	Common Lilac (many varieties)	12' x 10'	5 gal. container	5' o.c.	
1	Syringa patula 'Miss Kim'	Dwarf Korean Lilac	3' x 4'			
1 - 2	Berberis sp. (screening varieties)	Mentor Barberry, Red Leaf Barberry, Rose Glow Barberry	5'-6' x 4'-6'	5 gal. container	4' o.c.	Has thorns, evergreen
1 - 2	Berberis sp.	William Penn Barberry, Crimson Pygmy Barberry	2' x 2'-4'			Has thorns, evergreen
2	Abies balsamea 'Nana'	Dwarf Balsam Fir	2' x 3'			Shade, evergreen
2	Buddleia sp.	Butterfly Bush	varies			

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
2	<i>Buxus sempervirens</i>	Common Boxwood	10' x 8'	5 gal. container	4' o.c.	Shade, evergreen
2	<i>Buxus microphylla</i> 'Winter Gem'	Winter Gem Boxwood	3' x 3'			Shade, evergreen
2	<i>Cornus</i> sp.	Red Twig Dogwood, Yellow Twig Dogwood, Tartarian Dogwood	8' x 6'	5 gal. container	5' o.c.	<i>C. sericea</i> is Utah native.
2	<i>Cornus sericea</i> 'Kelseyi'	Dwarf Kelsey Dogwood	3' x 3'			
2	<i>Cotinus coggygia</i>	Smoke Tree	15' x 12'			
2	<i>Daphne burkwoodii</i>	Daphne	3' x 4'			
2	<i>Euonymus japonica</i>	Evergreen Euonymous	6' x 6'	5 gal. container	4' o.c.	Euonymous in this row are all evergreen
	<i>Euonymus japonica</i> 'Microphylla'	Box Leaf Euonymous	2' x 3'			
	<i>Euonymous kiatschovica</i> 'Manhattan'	Manhattan Euonymous	6' x 6'	5 gal. container	4' o.c.	
2	<i>Euonymous alata</i>	Winged Euonymous	8' x 10'	5 gal. container	5' o.c.	Euonymous in this row are all deciduous
	<i>Euonymous alata</i> 'Compacta'	Dwarf Winged Euonymous	4' x 4'			
2	<i>Ligustrum vulgare</i>	Common Privet (several varieties for screening)	8' x 6'	5 gal. container	5' o.c.	
2	<i>Pachistima myrsinites</i> (may also be listed as "Paxistima")	Mountain Lover	3' x 3'			Evergreen. Utah native.
2	<i>Paeonia suffruticosa</i>	Tree Peony	6' x 5'			
2	<i>Picea glauca</i> 'Conica'	Dwarf Alberta Spruce	10' x 5'	5 gal. container	4' o.c.	
2	<i>Prunus glandulosa</i>	Dwarf Flowering Almond	4' x 5'	5 gal. container	4' o.c.	
2	<i>Prunus x cistena</i>	Purple Sand Cherry	8' x 6'	5 gal. container	5' o.c.	
2	<i>Pyracantha angustifolia</i>	Dwarf Pyracantha	4' x 4'	2 gal. container	4' o.c.	Has thorns, evergreen

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
2	<i>Pyracantha coccinea</i>	Pyracantha, Firethorn	10' x 8'	5 gal. container	5' o.c.	Has thorns, evergreen
2	<i>Rosa meideland</i>	Meideland Rose And Others	3' x 6'			Has thorns.
2	<i>Salix purpurea</i>	Dwarf Blue Arctic Willow	6' x 4'	5 gal. container	4' o.c.	
2	<i>Spiraea x bumalda</i>	Spiraea	3' x 3'			
2	<i>Spiraea x vanhouttei</i>	Bridal Wreath Spiraea	6' x 5'	5 gal. container	4' o.c.	
2	<i>Taxus sp.</i> (screening)	Hick's Yew, Japanese Yew, Upright Yew, Brown's Yew, & others	6'-10' x 5'-8'	5 gal. container	4' o.c.	Shade, evergreen
2	<i>Taxus sp.</i> (low, spreading)	Spreading English Yew, Dwarf Japanese Yew, & others	3' x up to 8'			Shade, evergreen
2	<i>Thuja sp.</i> (screening)	Emerald Arborvitae, Blue Cone Arborvitae, & others	8'-15' x 3'-8'	5 gal. container	4' o.c.	Evergreen
2	<i>Thuja sp.</i> (low, spreading)	Woodward Globe Arborvitae, Little Giant Arborvitae, & others	3'-4' x 3'-4'			Evergreen
2	<i>Viburnum sp.</i>	Arrowwood Viburnum, Burkwood Viburnum, Cranberry Bush	8' x 8'	5 gal. container	5' o.c.	
2	<i>Viburnum rhytidophyllum</i>	Leatherleaf Viburnum	10' x 8'	5 gal. container	5' o.c.	Shade, evergreen
2	<i>Weigela florida</i>	Weigela	5' x 4'	2 gal. container	4' o.c.	

DECIDUOUS TREES						
0	<i>Celtis occidentalis</i>	Common Hackberry	50' x 40'	2" caliper	30' o.c.	
0	<i>Celtis reticulata</i>	Netleaf Hackberry	25' x 25'	1 1/2" caliper	20'	Utah native.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
0	<i>Eleagnus angustifolia</i>	Russian Olive	20' x 20'	1 1/2" caliper	15' o.c.	Not recommended for general use. Use on harsh sites only. Use seedless varieties. Has thorns.
0	<i>Fraxinus velutina</i>	Velvet Ash	40' x 30'	2" caliper	25' o.c.	Utah native.
0	<i>Prunus virginiana</i>	Chokecherry	15' x 10'	5 gal. container	10' o.c.	Utah native.
0	<i>Quercus gambelii</i>	Gambel Oak / Scrub Oak	25' x 15'	5 gal. container	10' o.c.	Utah native.
0	<i>Robina ambigua</i>	Idaho Locust	40' x 20'	2" caliper	20' o.c.	
0	<i>Robinia pseudoacacia</i> 'Purple Robe'	Purple Robe Locust	50' x 30'	2" caliper	25' o.c.	Not recommended for general use. Use on harsh sites only.
1	<i>Acer campestre</i>	Hedge Maple	30' x 20'	2" caliper	15' o.c.	
1	<i>Acer ginnala</i>	Amur Maple	20' x 15'	5 gal. container	10' o.c.	May be subject to chlorosis.
1	<i>Acer glabrum</i>	Rocky Mountain Maple	25' x 15'	1 1/2" caliper	15' o.c.	Utah native.
1	<i>Acer grandidentatum</i>	Bigtooth Maple	30' x 25'	1 1/2" caliper	20' o.c.	Utah native.
1	<i>Acer negundo</i>	Boxelder	50' x 40'	2" caliper	30' o.c.	Not recommended for general use. Use on harsh sites only. Use seedless varieties. Utah native.
1	<i>Acer nigrum</i>	Black Maple	60' x 40'	2" caliper	30' o.c.	
1	<i>Acer tataricum</i>	Tatarian Maple	20' x 15'	5 gal. container	12' o.c.	
1	<i>Amelanchier laevis</i>	Princess Diane Serviceberry, Cole's Select Serviceberry, Laevis Serviceberry	20' x 15'	5 gal. container	12' o.c.	
1	<i>Catalpa speciosa</i>	Western Catalpa	60' x 40'	2" caliper	30' o.c.	Large seed pods. May be subject to chlorosis.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
1	Gleditsia triacanthos inermis	Thornless Honey Locust (several varieties)	35' x 25'	2" caliper	25' o.c.	
1	Gymnocladus dioica	Kentucky Coffee Tree	50' x 25'	2" caliper	25' o.c.	
1	Koelreuteria paniculata	Goldenrain Tree	25' x 25'	1 1/2" caliper	20' o.c.	
1	Maclura pomerifera	Osage Orange	30' x 20'	1 1/2" caliper	20' o.c.	
1	Malus sp.	Apple, including Crabapples (many varieties)	20' x 15'	1 1/2" caliper	15' o.c.	
1	Morus alba	Fruitless Mulberry	40' x 25'	2" caliper	25' o.c.	
1	Quercus macrocarpa	Bur Oak	50' x 30'	2" caliper	30' o.c.	
1	Taxodium distichum	Bald Cypress	60' x 25'	5' - 6'	25' o.c.	Establishment period up to 5 years.
1	Ulmus parvifolia	Lacebark Elm	40' x 25'	2" caliper	25' o.c.	
1 - 2	Crataegus sp.	Hawthorn	20' x 15'	1 1/2" caliper	15' o.c.	Has thorns. C. douglassii is Utah native.
1 - 2	Fraxinus pennsylvanica 'Marshall Seedless'	Marshall Seedless Green Ash	50' x 50'	2" caliper	30' o.c.	Subject to borers, brittle branches
1 - 2	Fraxinus pennsylvanica 'Patmore'	Patmore Seedless Green Ash	50' x 40'	2" caliper	30' o.c.	Subject to borers, brittle branches
1 - 2	Fraxinus pennsylvanica 'Summit'	Summit Green Ash	50' x 40'	2" caliper	30' o.c.	Subject to borers, brittle branches, seeds
2	Acer pseudoplatanus	Sycamore Maple	50' x 30'	2" caliper	25' o.c.	May be subject to chlorosis.
2	Acer truncatum	Shantung Maple	25' x 20'	1 1/2" caliper	20' o.c.	

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
2	Aesculus sp.	Horsechestnut	40' x 30'	2" caliper	25'	Avoid planting where trees will be subject to reflected heat. Tree has large, inedible , fruit.
2	Cercis canadensis	Eastern Redbud	25' x 20'	1 1/2" caliper	20' o.c.	
2	Ginkgo biloba	Ginkgo	50' x 30'	2" caliper	30' o.c.	
2	Juglans nigra	Black Walnut	50' x 40'	2" caliper	30' o.c.	
2	Platanus acerifolia	London Plane Tree, Sycamore	60' x 40'	2" caliper	30' o.c.	
2	Populus alba 'Pyramidalis'	Bolleana Poplar	60' x 20'	2" caliper	15' o.c.	Not recommended for general use. Use on harsh sites only.
2	Populus sp.	Cottonwood, improved "cottonless" varieties	60' x 40'	2" caliper	30' o.c.	Not recommended for general use. Use on harsh sites only. Use seedless varieties. P. angustifolia and P. fremonti are Utah natives.
2	Pyrus calleryana	Flowering Pear	25' x 20'	2" caliper	20' o.c.	
2	Quercus robur	English Oak	80' x 40'	2" caliper	35' o.c.	
2	Quercus rubra	Red Oak	80' x 50'	2" caliper	40' o.c.	May be subject to chlorosis
2	Sophora japonica	Japanese Pagoda Tree	40' x 30'	2" caliper	25' o.c.	
2	Sorbus sp.	Mountain Ash,	25' x 20'	1 1/2" caliper	15' o.c.	
2	Syringa reticulata	Japanese Tree Lilac	25' x 20'	1 1/2" caliper	20' o.c.	
2	Tilia tomentosa	Silver Linden	45' x 30'	2" caliper	25' o.c.	
2	Zelkova serrata	Japanese Zelkova	50' x 40'	2" caliper	30' o.c.	

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
EVERGREEN TREES						
0	Juniperus sp.	Juniper	20' x 15'	varies	20'	Several Utah natives
0	Pinus edulis	Pinyon Pine	20' x 15'	4/5'	15'	Utah native.
1	Calocedrus decurrens	Incense Cedar	50' x 20'	5/6'	20'	
1	Cedrus sp.	Cedar	40' x 30'	5/6'	30'	
1	Pinus aristata	Bristlecone Pine	15' x 12'	3/4'	10'	Utah native.
1	Pinus densiflora	Japanese Red Pine	30' x 10'	3/4'	10'	
1	Pinus flexilis	Limber Pine	40' x 30'	4/5'	25'	Utah native.
1	Pinus heldreichii leucodermis	Bosnian Red Cone Pine	20' x 12'	4/5'	10'	
1	Pinus jeffreyi	Jeffrey Pine	60' x 25'	4/5'	25'	
1	Pinus monophylla	Singleleaf Pinyon Pine	20' x 15'	4/5'	15'	Utah native.
1	Pinus mugo	Mugo Pine	20' x 15'	4/5'	15'	
1	Pinus nigra	Austrian Pine	50' x 25'	5/6'	20'	
1	Pinus ponderosa	Ponderosa Pine	80' x 30'	5/6'	30'	Utah native.
1	Pinus sylvestris	Scotch Pine	60' x 25'	5/6'	25'	
1	Pinus thunbergiana	Japanese Black Pine	20' x 15'	4/5'	15'	
1	Pinus wallichiana	Himalayan White Pine	60' x 25'	4/5'	25'	
2	Abies concolor	White Fir	60' x 25'	5/6'	25'	Utah native.
2	Picea abies	Norway Spruce	60' x 25'	5/6'	25'	
2	Pseudotsuga menzeisii 'Glauca'	Rocky Mountain Fir	70' x 25'	5/6'	25'	Shade. Utah native.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	MINIMUM SIZE AT PLANTING	MAXIMUM SPACING	COMMENTS
2	<i>Sequoiadendron giganteum</i>	Giant Sequoia	80' x 30'	5/6'	30'	
2	<i>Thuja occidentalis</i>	American Arborvitae	40' x 25'	5/6'	25'	

References

- “Low Water Use Plant List”, Compiled by Fred Liljegren, U.S. Department of the Interior, Bureau of Reclamation.
- “Water Wise Landscaping”, Terry Keane, Utah State University Cooperative Extension Service, Logan, Utah.
- “Urban and Community Forestry, a Guide for the Interior Western United States”, Intermountain Region, U.S. Forest Service and the Utah State University Cooperative Extension Service, Logan, Utah.
- “Interagency Forage & Conservation: Planting Guide for Utah”, Utah State University Cooperative Extension Service, Logan, Utah.
- “DROUGHT, a Database of Irrigation Requirements for Woody Plants of Northern Utah” (unpublished), compiled by Larry A. Rupp, Plants, Soils, and Biometeorology Department, Utah State University, Logan, Utah.
- “Ornamental and Shade Trees for Utah”, E. Gregory McPherson and Gregory H. Graves, Utah State University Cooperative Extension Service, Logan, Utah.
- “Sunset Western Garden Book”, Sunset Publishing Corporation.
- “American Standard for Nursery Stock”, American Association of Nurserymen.