



2011

Landscape Guidelines Handbook



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CITY OF WEST JORDAN

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Purpose

This manual is a supplemental tool meant to assist in the implementation of the City's landscape requirements and provide an educational guide for landscape and irrigation design. Proper application of these principles will promote positive and enriching development by assuring that landscapes are not only water wise, but provide an aesthetically pleasing and flourishing atmosphere. In so doing West Jordan will become a more cohesive, remarkable and unmistakable community that its citizens can continue to take pride in.

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Landscape Design

The Zoning Ordinance Landscape Requirements (Title 13, Chapter 13) provides general requirements to provide a wide variety of landscape styles and designs throughout the city. The regulations are designed to create water wise landscaping while not hindering the potential scope of landscape design. The restrictions range from limiting the amount of turf grasses which can be incorporated into a design to requiring 75% of the plants, excluding sod, to be water wise. The below standards are guidelines which should be incorporated into all landscape designs.

Design Considerations:

1. *Aboveground Utilities:* The landscape design should identify the location of aboveground public utilities (i.e., overhead power lines, transformers, meter boxes, backflow preventers, etc.), and offer design solutions to mitigate the visual impact of such elements on the site while not obstructing access to such facilities for maintenance and service.
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- Jordan Valley Water Conservancy District Gardens*
2. *Sign Visibility:* Although landscaping may not initially appear to obscure a sign, it may significantly reduce or eliminate the sign's effectiveness unless taken into account in the planning stage. Existing and proposed signs should be shown on the landscape plan. Selection and placement of plants in the vicinity of signs should be determined by the mature height and spread of the plants to ensure that signs are not obscured from view when the landscape has reached full maturity. Plant foliage shall not obscure in any way complete visibility of public safety and traffic regulatory signs.
 3. *Light pollution and buffering:* Plants should be used to prevent light pollution from parking lots and buffering from adjacent uses. A combination of plants, fencing, berms and existing topographic features may be used to provide the screening and buffering, as appropriate to the specific site area being designed.
 4. *Soil Preparation:* Soil preparation should be suitable to provide healthy growing conditions for the plants and to encourage water infiltration and penetration. Soil preparation should include scarifying the soil to a minimum depth of six inches (6") and amending the soil with organic material as per specific recommendations from a landscape designer based on a topsoil analysis.
 - a. *Topsoil Analysis:* If the landscape designer decides to obtain and provide a topsoil suitability analysis, it should include the following characteristics and quantitative values:
 - i. Soluble salts (dS/m or mmho/cm);
 - ii. pH;
 - iii. Sand (%);
 - iv. Silt (%);

- v. Clay (%);
 - vi. Texture class (sandy clay, clay loam, silty sand, etc.);
 - vii. Organic matter (%);
 - viii. % Coarse fragments (>2 mm diameter);
 - ix. Sodium adsorption ratio (SAR).
5. *Slopes*: Areas with slopes greater than 30% should be landscaped with deep rooting, water conserving plants to provide erosion control and soil stabilization.
 6. *Energy Conservation*: Plant placement shall be designed to reduce the energy consumption needs of the development.

Design Standards:

1. *Scale and Nature of Plants*: The scale and nature of plants should be appropriate to the size of the structures. Large scaled buildings, for example, should generally be complemented by larger scaled plants.
2. *Selection of Plants*: Plants should be selected for form, texture, color, pattern of growth and adaptability to local conditions. All plants should be of good quality and capable of withstanding the extremes of individual site microclimates.
3. *Evergreens*: Evergreens should be incorporated into the landscape design, particularly in those areas where screening and buffering is required.
4. *Deciduous*: Deciduous trees should be placed on the south and west sides of buildings to provide shade from the summer sun.
5. *Winds*: Evergreens and other plant materials should be concentrated on the north side of buildings to dissipate the effect of winter winds.
6. *Softening Of Walls And Fences*: Plants should be placed intermittently against long expanses of building walls, fences, and other barriers to create a softening effect
7. *Detention/Retention Basins and Ponds*: Site drainage and detention facilities should be integrated into the overall landscape design as open space. Detention/retention basins and ponds should be landscaped, as opposed to the use of rock gravel. Such landscaping may include shade and ornamental trees, evergreens, shrubbery, hedges, turf, ground cover and/or other plants.

Maintenance and Preservation:

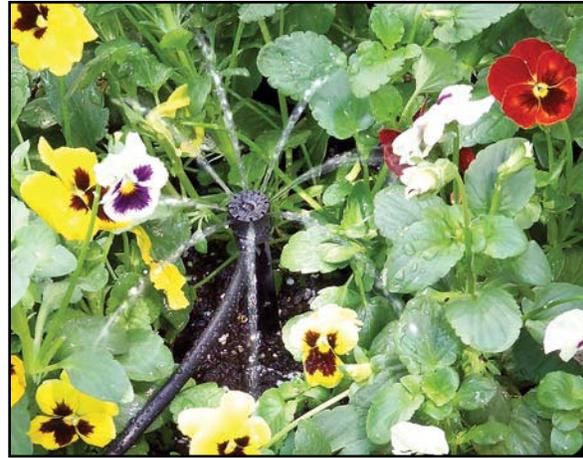
1. *Maintenance*: All landscaping plants should be maintained in good condition so as to present a healthy, neat and orderly appearance. Plants not in this condition shall be removed and replaced when necessary.
2. *Mulch*: Mulch shall be refreshed regularly to support plant health, suppress weeds and maintain a neat appearance.
3. *Weeds*: Weeds should be controlled to prevent spread and maintain a neat appearance.
4. *Preservation*: Existing plants which are healthy and free of injury and disease should be preserved, when possible, rather than replaced in order to contribute to a mature landscaping garden.
5. *Tree Fostering Program*: Participation in the City's Tree Fostering Program is highly encouraged.

Irrigation Systems

The below information provides detailed design guidelines for irrigation systems. Generally, these standards have been adapted from the Utah Irrigation Association's "Minimum Standards for Efficient Landscape Irrigation System Design and Installation." The Utah Irrigation Association and the National Irrigation Association can provide industry standards which can be incorporated into irrigation designs in addition to those found below.

Design Considerations:

1. *Irrigation Systems:* While irrigation systems are necessary for certain landscape areas, and may be desirable for other applications, all irrigation systems should be designed for the most efficient use of water.
2. *Parkstrip Landscaping:* Parking strips and other landscaped areas less than eight feet (8') wide should not be irrigated with pop up fixed or rotor sprinklers. These areas should generally be landscaped with water conserving plants or approved street trees irrigated with micro spray, bubblers or drip irrigation. Turf grass should only be used in these areas if irrigated with surface bubblers or subsurface systems.
3. *Irrigation Times:* Spray head sprinklers shall be scheduled to operate between six o'clock (6:00) P.M. and ten o'clock (10:00) A.M. to reduce water loss from wind and evaporation.
 - a. Exceptions: Bubblers, drip and subsurface irrigation and during the 60-day plant establishment period.
4. *Reduction of runoff:* Valves shall be programmed for multiple repeat cycles where necessary to reduce runoff, particularly on slopes and soils with slow infiltration rates.
5. *Winterization:* All pressurized irrigation systems shall be winterized each year.
6. *Weather:* All irrigation systems should be equipped with controllers for temporary shutoff due to inclement weather thru internal/external options such as rain, wind, and freeze devices.
7. *Installation:* Irrigation systems should be installed by an irrigation contractor, as defined in West Jordan Municipal Code Section 13-2-3.



Bubbler Irrigation System

Design Standards:

1. *Slope:* On slopes exceeding thirty three percent (33%), the irrigation system should consist of drip emitters, bubblers or sprinklers with a maximum average precipitation rate of 0.85 inch per hour, and the controller clock should be set with appropriate cycles and run times to eliminate runoff.
2. *Valve Separation:* Each valve should irrigate a landscape with similar site, slope and soil conditions and plant materials with similar watering needs. Turf and non-turf areas shall be

- irrigated on separate valves. Each type of irrigation device (drip, bubblers, fixed, rotors, etc.) shall be placed on separate valves.
3. *Tree Irrigation:* Drip emitters or a bubbler should be provided for each tree. Bubblers should not exceed one and one-half ($1\frac{1}{2}$) gallons per minute per device. Bubblers for trees should be placed on a separate valve unless found unfeasible due to the limited number of trees on the project site.
 4. *Drip Irrigation:* Drip irrigation lines should be installed underneath mulch, except for emitters and where approved as a temporary installation. Filters and end flush valves should be provided as necessary.

Irrigation Schedules:

The City recommends that two irrigation schedules be created based on sprinkler precipitation rates. The first schedule should cover the initial sixty (60) day plant establishment period. The second schedule should cover the post-establishment period. The table should suggest sprinkler run times, in minutes, and irrigation frequency to apply $\frac{1}{2}$ inch of water based on each zone's designed pressure and precipitation rate. Copies of these schedules should be provided to the property owner and business owner. Both the establishment and post-establishment irrigation schedules should be posted visibly near the irrigation controller and include the following information for each valve:

- a. Station (valve) number;
- b. Plant type;
- c. Sprinkler type;
- d. Precipitation rate (inches per hour);
- e. Minutes required for appropriate watering depth;
- f. Cycles and run times (minutes per cycle) to avoid runoff;
- g. Irrigation intervals (days between watering) based on plant material, soil type, and the seasonal fluctuations in water demand. The seasonal intervals found on the next page may be used as a general guide, but may be adapted as needed:

Month	Apply One-Half Inch Of Water
January	No irrigation
February	No irrigation
March	No irrigation
April	Every 6 days (if needed)
May	Every 4 days
June	Every 3 days
July	Every 3 days
August	Every 3 days
September	Every 6 days
October	Every 10 days (if needed)
November	No irrigation
December	No irrigation

Tree Protection and Selection

Existing trees should be protected during site construction when feasible and new trees should be selected with the sites constraints and specific tree characteristics in mind. Best Management Practices (BMP) have been provided below for the protection of existing trees and the selection of new trees. These BMPs were developed and recommended by professional arborists, urban and community foresters and landscape architects.

Existing Tree Protection:

Trees should be protected throughout their lives from damage to maximize their health, safety, functionality, and benefits. Construction on a property does not necessarily mean that existing trees will need to be removed. Every effort should be made to protect existing trees to ensure a mature landscape.

Tree Protection Techniques:

Tree protection involves activities designed to preserve and protect tree health by avoiding damage to tree roots, trunk, or crown. Site development planning prior to site disturbance should include identifying tree protection zones for all trees designated for retention.

Tree protection may be passive or active. Passive tree protection, most commonly used during the planning or post-development stages, simply means avoiding any disturbance or harmful activity near the tree. Active tree protection involves physical protection barriers and is generally required during any site disturbance that may impact retained trees, such as grading, building construction and maintenance, infrastructure and utility installation and maintenance, and other landscape changes that may affect the structural integrity and stability of retained trees.

Existing tree root systems should be protected during construction in order to increase the likelihood of the trees survival. Each tree has a critical root zone that varies by species and site conditions which if disturbed may increase a trees probability of failure or death. There are two common methods to determine the critical root zone. The first has been identified by the International Society of Arboriculture as an area equal to 1-foot radius from the base of the tree's trunk for each 1-inch of the tree's diameter at 4.5-feet above grade. The second method is to use a tree's dripline to estimate the critical root zone.

Best Management Practices:

1. Plan and budget for tree conservation and protection as part of the development process.
2. Plan for tree protection well in advance, at least one growing season prior to beginning of construction activities, where possible, or during site planning prior to construction.
3. Employ a certified arborist or an urban forester whenever possible to assist in tree protection planning, implementation, monitoring, and follow-up maintenance.
4. Plan to protect trees located on adjacent property, including those portions of the roots, trunk, and crown growing into or over the developing property.
5. Evaluate soil health and past site damage; incorporate that information into tree protection measures.
6. Evaluate existing trees on the site. Locate buildings, other structure and infrastructure through evaluation of the opportunities and constraints of existing trees. Select trees to be conserved

and protected based upon their location, species, quality, health and benefits such as energy savings by shade or wind protection.

7. Remove trees within 10-feet of the proposed building or structure.
8. Remove trees that cannot be adequately protected.
9. Remove trees that have less than one-quarter of their total height composed of tree crown (tall and spindly), or those with more than one-third of the trunk wounded.
10. Do not remove the best trees.
11. Conserve and protect trees in stands or groups, where possible, to facilitate their protection and maintenance, and to keep the urban tree canopy intact.
12. Establish substantial penalties for tree damage and noncompliance with tree protection requirements during construction.
13. Complete preconstruction tree maintenance, including mulch, fertilization, supplemental irrigation as necessary, and pruning to remove dead, structurally weak, and low-aging branches.
14. Engage maintenance staff in early decision-making and education about care of retained trees.
15. Educate all workers on site about tree protection techniques and requirements during preconstruction meetings.
16. Establish critical root zones for both large and small trees.
17. Avoid cutting tree roots over 4-inches in diameter.
18. Make all necessary cuts to tree roots cleanly with sharp tools; never tear with a backhoe. A clean cut encourages good wound closure and confines the spread of decay.
19. Remove badly damaged trees that may attract insects and disease.
20. Monitor tree health and compliance with tree protection requirement regularly during construction.
21. Complete post-construction tree maintenance, including mulch, fertilization, irrigation, soil aeration, and pruning where necessary.



Fenced off Critical Root Zone

New Tree Selection:

When planting a new tree on site, several things will affect the long-term survival and health of the tree, including tree species, varieties, planting methods and site conditions. Keep the below best management practices in mind when decided on which tree species and variety to plant on a site.

Best Management Practices:

1. Select a tree of appropriate mature size for the site.
2. Make sure there is at tree planting and will be at tree maturity adequate clearance from overhead utility lines, pedestrian and vehicular traffic, buildings, signs, and street lights.

3. Consult with local utilities for planting specifications to maintain adequate utility clearance.
4. Select native tree species for planting when appropriate for the location and if good quality stock is available.
5. Use nonnative species and varieties if necessary where native soils may be severely impacted by long-term development, such as those found in many urban locations, and cannot support healthy native tree species. Choose noninvasive species and varieties appropriate to the development soils.
6. Select trees compatible with special site conditions, such as extremely wet (poor draining) or dry (excessive draining) soils.
7. Plan for a diversity of tree species and varieties to protect the urban forest from massive failure due to pest or disease infestation and to add visual interest.
8. Plant trees where they have plenty of room to grow to maturity without compromised health or form due to conflicts with adjacent infrastructure, such as power lines, and sewer or water lines.
9. Select only good quality planting stock.
10. Select nursery stock that meets the minimum standards for root ball size and quality as defined in ANSI A300 (Standards for Nursery Stock).
11. Plant the right tree in the right place (for example, don't plant large trees that require constant pruning to maintain safety under overhead power lines).

Noxious Weeds List

Weeds should be controlled to prevent their spread and maintain a neat appearance. Weeds listed on the Noxious weeds list, below, shall be removed and shall not be included in any new landscape planting. This list was compiled from the State of Utah Noxious Weeds List, as administered by the Utah Department of Agriculture, the list of additional noxious weeds declared by Salt Lake County in August of 2009, and the Utah Weed Control Association Noxious Weeds List. The plants below are listed in alphabetical order by their common name. The botanical name has been included for reference purposes.

West Jordan Noxious Weeds List		
	Common Name	Botanical Name
1	Bermudagrass	Cynodon dactylon
2	Black henbane	Hyoscyamus niger
3	Blue Lettuce	Lactuca pulchella
4	Buffalobur	Solanum rostratum
5	Bull Thistle	Cirsium vulgare
6	Camelthorn	Alhagi pseudalhagi
7	Canada thistle	Cirsium ravense
8	Common Burdock	Arctium minus
9	Dalmatian toadflax	Linaria dalmatica
10	Diffuse knapweed	Centaurea diffusa
11	Dyerswood	Isatis tinctoria L.
12	Field bindweed (Wild Morning Glory)	Convolvulus arvensis
13	Garlic mustard	Alliaria petiolata
14	Goatsrue	Galega officinalis
15	Hoary cress	Cardaria Spp.
16	Houndstongue	Cynoglossum officinale
17	Johnsongrass	Sorghum halepense
18	Jointed Goatgrass	Aegilops cylindrical
19	Leafy spurge	Euphorbia esula
20	Medusahead	Taeniatherum caput-medusae
21	Musk thistle	Carduus nutans
22	Myrtle spurge	Euphorbia myrsinites
23	Ox-Eye daisy	Chrysanthemum leucanthemum
24	Perennial pepperweed	Lepidium latifolium
25	Perennial sorghum	Sorghum halepense L. & Sorghum almum
26	Poison hemlock	Conium maculatum
27	Puncturevine	Tribulus terrestris
28	Purple loosestrife	Lythrum salicaria L.
29	Quackgrass	Agropyron repens

30	Russian knapweed	(<i>Centaurea repens</i>)
31	Russian Olive	<i>Elaeagnus angustifolia</i>
32	Saltcedar	<i>Tamarix ramosissima</i>
33	Scotch thistle	<i>Onopordum acanthium</i>
34	Silverleaf Nightshade	<i>Solanum elaeagnifolium</i>
35	Spotted knapweed	<i>Centaurea maculosa</i>
36	Squarrose knapweed	<i>Centaurea squarrosa</i>
37	St. John's wort	<i>Hypericum perforatum</i>
38	Sulfur cinquefoil	<i>Potentilla recta</i>
39	Velvetleaf	<i>Abutilon theophrasti</i>
40	Western Whorled Milkweed	<i>Asclepias subverticillata</i>
41	Yellow Nutsedge	<i>Cyperus esculentus</i>
42	Yellow starthistle	<i>Centaurea solstitialis</i>
43	Yellow toadflax	<i>Linaria vulgaris</i>



Russian Olive Tree; Photo by J.S. Peterson



Johnson Grass



Leafy Spurge

Street Tree List

The below Street Tree List is designed to provide a variety of trees, based on their appropriateness in certain circumstances, including the width of parkstrips, tree root depth, and mature height. These tree species may also be incorporated into general landscape areas. If other varieties of trees are preferred, a request for an assessment can be made with the Urban Forester.



Goldenrain Tree

Approved Street trees

Trees in parkstrips located under power lines:

Crabapple (mildew resistant and persistent fruit varieties only)

Goldenrain Tree

Japanese Tree Lilac

Maple; Hedge, Amur, Tartarian, Rocky Mountain, or Truncatum

Red Bud, Eastern

Trees in parkstrips 5-feet in width or less:

Any tree listed above

Amur Cork Tree

Chinese Elm (not Siberian Elm)

Hardy Rubber Tree

Red Horsechestnut

Turkish Filbert

Trees in parkstrips over 5-feet in width:

Any tree listed above

American Yellow-wood

Ash - Purple, Autumn, Green (may be more susceptible to borers)

Ginkgo (male only)

Hackberry

Japanese Zelkova



Hardy Rubber Tree

Kentucky Coffeetree (Does produce seedpods and due to its size, should be on the property owner's side of the sidewalk or planted in a parkstrip at least 10-feet in width.)

Little Leaf Linden

Maple- Bigtooth, Globe, Norway, Red or Sycamore

Oak - Bur, Red, Turkey, White, Chincapin or Shumard

Ornamental Flowering Pear

Purple Robe Locust

Japanese Pagoda Tree



Purple Ash Tree

Examples

The following examples are of several landscapes located within the City of West Jordan that contain excellent examples of water wise landscaping. All have won the West Jordan Water Wise Landscape Award.

Commercial:





Residential:





Appendix

- I. Recommended Plant List**
- II. Firewise Plants for Utah Landscapes**
- III. Landscape Area and Water Conserving Landscape Calculations Worksheet**
- IV. Water Allowance Worksheet**
- V. Landscape Certification Worksheet**
- VI. Distribution Uniformity Audit Worksheet (For Turfgrass Areas)**

Recommended Plant List

The attached Plant List is designed to provide a variety of plant species, which are water conscious and suited for the soil and weather conditions typically found in the City of West Jordan. While every effort has been made to make the list as comprehensive as possible, it 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. Additionally, during periods of extended droughts, even xeric plants might benefit from periodic supplemental watering. 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 “water conserving” or “drought tolerant” plants for the purposes of this list.

Botanical Name is the scientific name that identifies plants using a system called binomial nomenclature; that is, by grouping plants with more or less similar physical traits together through levels of classifications: genus, species, varieties, and cultivars. Each plant has only one botanical name, making it unique from any other plant, unlike common names, which may vary region to region. Botanical name has been abbreviated to include only the genus, species and, if necessary, the variety; few cultivars or hybrids are named. The genus followed by “sp.” (singular), or “spp.” (plural) indicates that there are several different species of a plant which all have similar characteristics.

While a plant has only one botanical name it may be 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.

Area Value is the area of the plant canopy. Using this number, a designer or planner can determine the total area comprised by a single plant grouping or an entire landscape. Specific spacing recommendations were not made on the list to allow for a more creative use of plants and to recognize that a plant might be used differently in various landscapes.

If you are in need of guidelines to determine an appropriate average spacing of a plant on the list, consult the Height and Width column. To create a massed effect, place plants closer together so that branches overlap and mingle. For specimen plants, keep plants farther apart so that the plants form becomes distinct.

For trees, a standard guide is to plant on centers equaling, or slightly smaller than the diameter.

For long term health and sustainability of a landscape, allow plants adequate room to meet full growth without overcrowding.

Light is the recommended amount of sun light specific plants will require to be healthy and grow to their potential mature height and width. The amount of light can range from full shade, part shade, light shade, part sun, sun, and full sun.

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

Note: The *City of West Jordan Recommended Plant List* is a modified version of the *Water-Wise Plants for Salt Lake City* list created by Salt Lake City Corporation in September 1995, and updated in April 2004. This list is part of their Water Conservation Master Plan. The City of West Jordan modified the list in August 2010 to reflect differing code requirements and soil conditions than found in Salt Lake City.

City of West Jordan Recommended Plant List
Appendix I: City of West Jordan Landscape Guidelines Handbook

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
GROUND COVERS						
0	Juniperus communis	Common Juniper	2-4' x 4-6'	20-28'	Full sun to light shade	Evergreen. Low growing junipers; color and texture varies with cultivar. Should be in raised beds due to an intolerance to ice-melt.
0	Mahonia repens	Creeping Oregon Grape	0 2' x 6'	28'	Part to full shade	Utah native. Dry shade. Evergreen.
0	Rhus aromatica 'Gro-low'	Gro-low Sumac	0 2' x 6'	28'	Sun to shade	Glossy green, three-lobed leaves have red fall color. Yellow spring flower followed by fuzzy red berries. Ice-melt tolerant.
1	Alyssum montanum	Mountain Gold Alyssum	4" x 15"	1'	Sun to part shade	Bright yellow flowers in early spring cover gray green foliage. Prolific re-seeder.
1	Anacyclus depressus	Mount Atlas Daisy	2" x 18"	1.75'	Full sun	Silvery green foliage; bright white daisy-like flower mid spring.
1	Antennaria parviflora; A. rosea	Pussy Toes; Pink Pussy Toes	4" x 18"	1.75'	Sun to part shade	Utah native; silvery foliage, pink or white ball shaped flowers.
1	Arctostaphylos uva-ursi	Kinnikinnick	3-6" x 24-36"	7'	Part shade (avoid afternoon sun)	Evergreen, Dark glossy foliage; pinkish bell shaped flowers in early spring flowers in early spring. Intolerant of soils that stay wet. Utah native.
1	Convallaria majalis	Lily-Of-The-Valley	8" x 24"	3'	Part to full shade	Dark green foliage; white bell shaped, fragrant flower sin early spring.
1	Fragaria sp.	Wild Strawberry	2" x 24"	3'	Sun to part shade	Utah Natives F. vesca and F. virginiana
1	Helianthemum nummula	Sunrose, Rockrose	8" x 36"	7'	Sun to light shade	Mat forming green to gray foliage. Simple flowers in white, pink, yellow, and reds in early spring.
1	Juniperus horizontalis	Creeping Juniper	6-18" x 5-8'	50'	Full sun	Evergreen. Needle color varies with cultivar. Ice-melt intolerant.
1	Rhus aromatica 'Autumn Amber'	Autumn Amber Sumac	1' x 3-4'	12.5'	Sun to shade	Lower growing than Gro-low; same glossy foliage and good fall color.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	Sedum sp.	Stonecrop	1- 6" x 12-24"	1-3'	Full to part sun	Large group of low growing succulents; leaf color and shape varies with cultivar. Not tolerant of foot traffic, typically not dense enough to choke out weeds and grass.
1	Stachys byzantina	Lamb's Ear	12-18" x 36"	7'	Sun to light shade	Velvety leaves are silvery white; spires of pink flowers mid-summer. Avoid overhead watering.
1	Symphoricarpos x chenaultii	Chenault Coralberry	3-4' x 4-6'	20'	Sun to part shade	Delicate, bluish green foliage; clusters of pinkish flowers followed by colorful purple berries that persist into winter.
1	Teucrium aroanium	Gray Creeping Germander	3" x 18"	1.75'	Sun to part shade	Silver gray leaves; fragrant lavender flowers in early summer.
1	Thymus pseudolanuginosus	Woolly Thyme	1-2" x 18"	1.75'	Full sun	Hairy gray foliage turns plum colored in fall; evergreen. Tolerates moderate foot traffic.
1	Thymus ssp.	Creeping Thyme	3-4" x 18"	1.75'	Full sun	Spring flowers in white, pinks, reds; green foliage; tolerates moderate foot traffic.
1	Veronica liwanensis	Turkish Speedwell	2" x 18"	1.75'	Sun to part shade	Vigorous perennial; evergreen foliage; violet blue flowers in spring. Needs afternoon shade.
1	Veronica oltensis	Thyme-leaf Speedwell	1" x 24"	3'	Sun to part shade	Tiny dark gray green leaves; azure blue flowers late spring; evergreen.
1	Veronica pectinata	Blue Woolly Speedwell	2" x 18"	1.75'	Sun to part shade	Dense mat of small dark green leaves, covered with tiny blue flowers in mid spring.
2	Ajuga reptans	Ajuga Bugleweed	2-4" x 12-18"	1.75'	Part to full shade	Low-growing ground cover with spires of blue or pink flowers. Leaf color varies with cultivar, from dark green, to purple, and variegated.
2	Cotoneaster horizontalis	Rockspray Cotoneaster	2-3' x 10-15'	113'	Sun to light shade	Stiff angled branches have small round leaves. White flowers followed by red berries.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
2	<i>Euonymus fortunei</i>	Purple-leaf Winter Creeper	2' x 6'	28'	Part shade	Evergreen, though sometimes semi-evergreen. Dark green leaves turn deep purple in fall. Will adhere to and climb surfaces.
2	<i>Galium odoratum</i>	Sweet Woodruff	4" x 18"	1.75'	Part to full shade	Whorls of bright green foliage; star-shaped flowers in late spring. Foliage has lovely fragrance when crushed.
2	<i>Hypericum calycinum</i>	Aaron's Beard, St. Johnswort	12-18" x 24"	3'	Part to full shade	Yellow spring flower; attractive blue green foliage stays evergreen in mild winters. Sometimes take on purplish winter hue.
2	<i>Lamium maculatum</i>	Dead nettle	8-12" x 24"	3'	Part to full shade	White to purplish blooms late spring; foliage varies with cultivar – many are variegated. Adoptable to dry shade.
VINES						
Note: Vines by their nature grow rapidly and require maintenance to keep them in check. May require very sturdy supports.						
1	<i>Campsis radicans</i>	Trumpet Vine	30' x 20'	314'	Sun to part shade	Needs a strong support. Orange to scarlet trumpet shaped flowers mid-summer; interesting winter pods. Attracts bees, hornets and wasps.
1	<i>Lonicera japonica</i>	Japanese Honeysuckle	12" x 15'	176'	Sun to light shade	Creamy white and yellow flowers. Climbs with tendrils and twinning branches.
2	<i>Clematis ligustifolia</i> ; <i>C. hirsutissima</i> ; <i>C. occidentalis</i>	Clematis	20' x 10'	78'	Plant so that the base of the plant is in the shade and its branches are in the sun	Utah Natives include <i>C. ligustifolia</i> , <i>C. hirsutissima</i> , <i>C. occidentalis</i> . Other varieties may be invasive.
ORNAMENTAL GRASSES						
0	<i>Bouteloua curtipendula</i>	Sideoats Grama	1-2' x 1'	.75'	Full sun	Popular grass for meadows and reclamation. Fine textured, purple spikelets form on one side of stem.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
0	<i>Bouteloua gracilis</i>	Blue Grama	8-10" x 12"	.75'	Full sun	Native plains grass suitable for turf. Warm season grass goes dormant in winter months.
0	<i>Elymus cinereus</i>	Great Basin Rye	3-4' x 2'	3'	Full sun	Utah native. Blue gray foliage.
0	<i>Festuca arizonica</i>	Arizona Fescue	10"-2' x 2'	3'	Sun to light shade	Clumping bunchgrass with wiry seed stalks up to 3 feet tall. Gray green to blue green leaves.
0	<i>Oryzopsis hymenoides</i> (also listed as <i>Stipa hymenoides</i>)	Indian Rice Grass	2' x 2'	3'	Full sun	Cool-season native bunch grass with showy panicles. Provides forage and habitat opportunities for wildlife.
0	<i>Pleuraphis jamesii</i> (also listed as <i>Hilaria jamesii</i>)	Galleta grass; Curly grass; James; grass	18" x 2'	3'	Full sun	Dense, fuzzy spikelets are angled zig-zag up 2 foot tall stalks. Foliage is gray green, aging to straw. Good choice for dry wildflower meadow. Attractive to butterflies.
0	<i>Schizachyrium scopa</i>	Little Bluestem	2-4' x 30"	4.5'	Sun to light shade	Upright, erect habit. Leaves flat and stiff, light green aging to darker green; fall color is red. Inflorescence is wispy. Tolerant of heavy clay soils. Attractive to butterflies, birds. Utah native.
0	<i>Sporobolus contractus</i>	Spike Dropseed	16" x 12"	.75'	Full sun	Very heat tolerant. Interesting flower spikes. Utah native. Tolerates sandy soils but is adaptive.
0	<i>Stipa comata</i>	Needlegrass	4' x 1'	.75'	Sun to light shade	Slender grass with long, elegant awns.
1	<i>Blepharoneuron tricho</i>	Pine Dropseed; Hairy Dropseed	30" x 30"	4.5'	Sun to light shade	Upright, arching bunchgrass. Green panicles turn straw colored, and persist into winter. Provides food and shelter for butterflies and birds.
1	<i>Elytrigia elongata</i>	Tall Wheatgrass	4-5' x 18"	1.75'	Full sun	A very upright grass; straw yellow stalks.
1	<i>Festuca ovina glauca</i>	Blue Fescue	1-2' x 1'	.75'	Full sun	Evergreen. Bluish color. Many cultivars are available, most not as large as the species.
1	<i>Helictotrichon sempervirens</i>	Blue Avena grass; Blue oat grass	4' x 2'	3'	Full sun	Gray-blue foliage; soft brown plumes mid-summer.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	Koeleria macrantha	Prairie Junegrass	2' x 1'	.75'	Sun to light shade	Clumping bunchgrass with bright green foliage and upright flower spike. Provides food and habitat for birds and large mammals.
1	Muhlenbergia capellensis	Muhly Grass	3' x 3'	7'	Full sun	Plumes dusty pink.
1	Muhlenbergia montana	Mountain Muhly	30" x 24"	3'	Sun to moderate shade	Upright bunchgrass with open panicles of green, aging to straw and persistent into winter.
1	Muhlenbergia rigens	Deergrass	3-5' x 3'	7'	Sun to light shade	Upright and arching, coarse-textured bunchgrass; spikelets to 5 feet tall, aging to straw. Wildlife and bird habitat. Good container plant.
1	Muhlenbergia wrightii	Spike Muhly	1-2' x 2'	3'	Full sun	Fine textured, upright green leaf blades. Green florets age to gray black and persist into winter.
1	Poa fendleriana	Muttongrass	1-2' x 1'	.75'	Sun to shade	Upright bunchgrass; bright green foliage. Airy panicles of yellow-green florets. Attractive to birds, butterflies.
1	Panicum virgatum	Switch grass	2' x 2'; Flower stalks to 5'	3'	Full sun	Steel blue foliage; upright habit. Florets arranged on arching stem. Plant turns orange in fall. Seeds attractive to birds.
1	Sorghastrum nutans	Indiangrass	4-5' x 18"	1.75'	Full sun	Upright habit; nice fall color; habitat for ground dwelling birds.
1	Sporobolus airoides	Alkali Sacaton	2' x 2'	3'	Full sun	Delicate appearing foliage with pinkish inflorescence. Tolerant of saline and clay soils.
2	Calamagrostis acutiflora	Feather Reedgrass	4' x 2'	12'	Full sun	Very upright grass; plumes early.
2	Calamagrostis acutiflora 'Overdam'	Overdam Reedgrass	3' x 2'	3'	Part sun	Green and white variegated foliage; whitish plumes; best in afternoon shade.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
2	Calamagrostis arundinacea 'Karl Foerster'	Foerster Reedgrass	4' x 3'	7'	Full sun	Very upright grass. Oat like plumes bloom mid-summer and persist well into winter.
2	Miscanthus sinensis	Maidenhair Grass	4-10' x 3-7'	7-38'	Sun to light shade	Upright fountain-like habit; wide variety; white variegated forms prefer some afternoon shade; good winter presence.
2	Pennisetum alopecuroides	Fountain Grass	2-3' x 2-3'	7'	Sun to light shade	Soft, foxtail-like plumes appear mid-summer. Requires good drainage.
HERBACEOUS PERENNIALS						
Note: Many perennials in water zones 0 and 1 may die if overwatered, care should be given to not over-water.						
0	Agave parryi	Parry's Agave	12" x 18"; flower spike to 8'	1.75'	Sun to light shade	Thick, blue gray sward-like leaves form low rosette. Stem has many yellow to red tinged flowers mid summer. Flowers infrequently. Utah native.
0	Berlandiera lyrata	Chocolate flower	18" x 12"	1'	Full sun	Yellow mid-summer daisy; fragrant
0	Callirhoe involucrata	Poppy Mallow; Prairie Winecup	12" x 36"	7'	Full sun	Magenta flowers mid summer into fall. Deeply lobed foliage.
0	Calylophus hartwegii	Fendler's Sundrops	1' x 3'	7'	Full sun	Four-petaled pale yellow flowers fade to orange and reddish pink, blooming all summer. Green foliage.
0	Delosperma cooperi	Pink Hardy Iceplant	6" x 24"	3'	Full sun	Pink flower late spring; succulent green foliage.
0	Eriogonum umbellatum	Sulfur Flower	12" x 18"	1.75'	Full sun	Utah native. Early to midsummer sulfur-yellow flowers above dark green foliage
0	Gaillardia aristata	Blanket Flower	2-3' x 2-3'	7'	Full sun	Utah native. Yellow and mahogany summer flower. Can take over or be invasive due to reseeding.
0	Gaura lindheimeri	Gaura, Whirling Butterflies	36" x 30"	4.5'	Full sun	White butterfly-like flowers bloom all summer. Fine textured foliage.
0	Oenothera caespitosa	Tufted Evening Primrose	6" x 6"	0.5'	Full sun	Utah native. Large white flowers; opens in evening.
0	Oenothera howardii	Bronze Evening Primrose	6" x 6"	.5'	Full sun	Utah native. Yellow flowers fade to bronze.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
0	<i>Penstemon ambiguus</i>	Sand Penstemon	2' x 2'	3'	Sun to light shade	Airy clumps of grass-like foliage with many stems of pink flowers early to mid summer.
0	<i>Penstemon cyananthus</i>	Wasatch Beardtongue	36" x 12"	.1'	Full sun	Sky blue flowers early to mid summer. Utah native.
0	<i>Penstemon eatonii</i>	Eaton's Beardtongue	36" x 12"	1'	Sun to light shade	Scarlet red flowers; dark shiny green foliage. Utah native.
0	<i>Penstemon palmeri</i>	Palmer Penstemon	3' x 2'	3'	Full sun	Tall spikes of pale pink, fragrant flowers. Utah native.
0	<i>Penstemon pseudospectabilis</i>	Desert Penstemon	2-3' x 2'	3'	Sun to part shade	Vibrant, hot pink flowers late spring to mid summer. Blue green foliage.
0	<i>Penstemon strictus</i>	Rocky Mountain Penstemon	30" x 30"	4.5'	Full sun	Brilliant purple blue flowers early to mid summer. Rich green foliage. Utah native.
0	<i>Ratibida columnifera</i>	Prairie Coneflower, Mexican Hat	24" x 18"	1.75'	Full sun	Yellow and mahogany petals surround pronounced center mid summer; ferny foliage.
0	<i>Sphaeralcea</i> ssp.	Globeamallow	2-3' x 1'	.75'	Full sun	True orange flowers in summer. Foliage is pale gray green. Utah native.
0	<i>Tanacetum densum</i>	Partridge Feather	6-8" x 12"	.75'	Full sun	Mats of silvery white, finely cut foliage; yellow button flowers early summer.
0	<i>Viguiera multiflora</i>	Showy Goldeneye	24" x 36"	7'	Full sun	Utah native. Small daisy-like yellow flowers; will naturalize. Leaves are lance-shaped.
1	<i>Achillea ageratifolia</i>	Greek Yarrow	4" x 18"	1.75'	Full sun	Bright white flower clusters above gray green foliage. Late spring bloom.
1	<i>Achillea filipendula</i>	Fernleaf Yarrow	2-4' x 2'	3'	Full sun	Two widely used cultivars, 'Coronation Gold' and 'Moonshine'.
1	<i>Achillea serbica</i>	Serbian Yarrow	4" x 15"	1'	Full sun	Tight gray mats of evergreen foliage topped by white spring flowers
1	<i>Adenophora latifolia</i>	Lilyleaf Ladybells	2-3' x 2'	3'	Part to full shade	Tall stalks of trumpet-like lavender blue flowers in early summer. Good in dry shade.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	<i>Aethionema schistosum</i>	Persian Rockcress	10" x 15"	1'	Full sun	Fragrant, soft pink flowers cover plant in early spring. Tiny leaves are evergreen and powdery blue.
1	<i>Agastache cana</i>	Wild Hyssop	2-3' x 2'	3'	Full sun	Unusual colors, fragrant flowers, and aromatic gray foliage. Airy, upright habit. Late summer blooming.
1	<i>Agastache rupestris</i>	Licorice Hyssop	2-3' x 2'	3'	Full sun	Orange and lavender midsummer to fall flowers, fragrant needle-like foliage. Very attractive to hummingbirds.
1	<i>Alyssum montanum</i>	Mountain Gold Alyssum	4" x 15"	1'	Sun to part shade	Bright yellow flowers in early spring cover gray green foliage. Can be invasive.
1	<i>Amorpha canescens</i>	Leadplant	2-4' x 3'	7'	Full sun	Silvery-white hairy foliage with pink pea-like flower.
1	<i>Anacyclus depressus</i>	Mount Atlas Daisy	2" x 18"	1.75'	Full sun	Silvery green foliage; bright white daisy-like flower mid spring.
1	<i>Anaphalis margaritacea</i>	Pearly Everlasting	2' x 2'	3'	Sun to light shade	Golden flowers in silver bracts; woolly silver foliage. Good choice for meadow mixes.
1	<i>Antennaria parviflora</i> ; A. rosea	Pussy Toes; Pink Pussy Toes	4" x 18"	1.75'	Sun to part shade	Utah native; silvery foliage, pink or white ball shaped flowers.
1	<i>Artemisia</i> spp.	Wormwood	10- 36" x 36"	7'	Full sun	Silver foliage, finely cut. Size varieties with cultivar.
1	<i>Coreopsis verticillata</i>	Threadleaf Coreopsis	24" x 24"	3'	Sun to light shade	Delicate yellow daisy-like flowers all summer. Needle like foliage.
1	<i>Corydalis lutea</i>	Yellow Corydalis	15" x 15"	1'	Part to full shade	Yellow "snap-like" flower through out summer.
1	<i>Epimedium x rubrum</i>	Barrenwort	12" x 12"	.75'	Shade	Small orchid-like flowers in early summer; foliage is heart-shaped and evergreen in mild winters.
1	<i>Erodium chrysanthum</i>	Yellow Stork's bill	5" x 12"	.75'	Full sun	Lacy gray green foliage; soft yellow flowers during summer months.
1	<i>Eupatorium greggii</i>	Texas Mist Flower	30" x 36"	7'	Sun to part shade	Lavender blue flowers, like fluffy balls, bloom all summer. With less water needs more shade. Attractive to butterflies.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	<i>Geranium viscosissimum</i>	Sticky Geranium	2-3' x 2'	3'	Part shade	Utah native. Soft pink flowers; nice fall foliage color.
1	<i>Globularia cordifolia</i>	Leather Leaf Powder Puff	4" x 15"	1'	Sun to part shade	Low mat of evergreen leaves; light blue flower puffs in late spring.
1	<i>Helianthemum nummularium</i>	Rockrose	6" x 18"	1.75'	Sun to part shade	Simple, five-petaled flowers in a wide range of colors; mats of green to gray foliage have fine texture.
1	<i>Kniphofia uvaria</i>	Red Hot Poker	3' x 3'	7'	Full sun	Grass like foliage, unusual bi-color flower spikes in yellow to red. Deer resistant.
1	<i>Lavandula angustifolia</i>	English Lavender (many cultivars available including Munstead, Hidcote, Nana, and Jean Davis)	15-30" x 15-24"	3'	Full sun	Aromatic green or gray foliage topped by fragrant purple spires. Mid summer bloom. Evergreen. Deer resistant.
1	<i>Lavandula intermedia</i>	Lavandin	24-36" x 18-24"	1.75' to 3'	Full sun	Aromatic, evergreen foliage; flowers slightly later than English Lavender. Deer resistant.
1	<i>Liatris punctata</i>	Dotted Gayfeather	18" x 18"	1.75'	Full sun	Magenta pink spires in late summer; grass-like foliage.
1	<i>Linum kingii</i>	King's Yellow Flax	8" x 10"	.5'	Full sun	Blue-gray foliage; yellow spring flower.
1	<i>Linum lewisii</i> (also listed as <i>L. perenne</i> v. <i>lewisii</i>)	Blue Flax; Lewis' Flax	24" x 18"	1.75'	Full to part sun	Wispy foliage; blue spring flower.
1	<i>Nepeta x faassenii</i>	Catmint	18" x 30"	4.5'	Sun to light shade	Lavender Blue flowers early summer; soft gray fragrant foliage.
1	<i>Oenothera berlandieri</i> 'Siskiyou'	Siskiyou Pink Mexican Primrose	12" x 12"	1'	Sun to part shade	Papery pink flowers bloom all summer; foliage is dark green. Can become invasive if over-watered.
1	<i>Oenothera missouriensis</i>	Missouri Evening Primrose	10-12" x 24"	3'	Full sun	Large, lemon yellow flowers open towards the end of day; glossy green foliage. Flowers all summer.
1	<i>Oenothera pallida</i>	Pale Evening Primrose	12" x 12"	1'	Full sun	Fast growing. Large white flowers; good choice for sandy soils.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	<i>Penstemon barbatus</i> .	Scarlet Bugler	2-4' x 2'	3'	Sun to light shade	Foliage is a low mound; flowers rise on spires early summer. Utah native.
1	<i>Penstemon caespitosa</i>	Tufted Beardtongue	2-12" x 36"	7'	Sun to light shade	Compact mat of gray green foliage covered with purple flowers from early to late spring.
1	<i>Penstemon linarioides</i>	Mat Penstemon	1' x 3'	7'	Sun to light shade	Fine textured gray green leaves; lavender-blue snap-like flowers late spring.
1	<i>Penstemon pinifolius</i>	Pine-leaf Penstemon	12" x 12"	1'	Full sun	Fine foliage; small scarlet trumpet-shaped flowers.
1	<i>Penstemon whippleanus</i>	Whipple's Penstemon	2-3' x 2'	3'	Sun to light shade	Burgundy purple flowers early to late summer. Utah native.
1	<i>Perovskia atriplicifolia</i>	Russian Sage	3-5' x 3-4'	12.5'	Full sun	Small lavender blue flowers in tall spires; foliage is gray green and aromatic. Cut back to ground in spring, keeps plant lush.
1	<i>Pulsatilla vulgaris</i> (also listed as <i>Anemone pulsatilla</i>)	Pasque Flower	9-12" x 12"	.75'	Sun to part shade	Magenta or purple cup shaped flowers in early spring, followed by fuzzy plum colored seed heads.
1	<i>Salvia officinalis</i>	Kitchen Sage	2' x 3'	7'	Full sun	Evergreen gray green foliage; edible foliage is aromatic.
1	<i>Santolina chamaecyparissus</i>	Lavender Cotton	12-18" x 18"	1.75'	Full sun	Gray foliage forms compact mound; yellow button flowers midsummer. Evergreen in mild winter. Aromatic.
1	<i>Santolina virens</i>	Green Santolina	12-18" x 18"	1.75'	Full sun	Bright green compact foliage; evergreen in mild winters.
1	<i>Sedum spectabile</i>	Showy Stonecrop	18-24" x 15"	1.75'	Sun to light shade	Fleshy blue-green leaves appear in mid spring, followed by white to pink broccoli-like flower.
1	<i>Sempervivum tectorum</i>	Hens And Chicks	4" x 12"	1'	Full sun	Succulent foliage forms low rosettes. Interesting specimen in rock gardens.
1	<i>Teucrium aroanium</i>	Creeping Germander	3" x 18"	1.75'	Sun to light shade	Mounds of silver foliage; lavender pink fragrant flowers mid summer.
1	<i>Teucrium chamaedrys</i>	Wall Germander	1' x 2'	3'	Sun to light shade	Dark glossy foliage is evergreen in mild winters; spikes of lavender pink flowers in summer.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	Zauschneria arizonica	Hummingbird Flower	1-2' x 2-4'	7'	Sun to part shade	Delicate scarlet, trumpet shaped flowers in early fall. Utah native.
1	Zauschneria latifolia	Hummingbird Fuchsia	18" x 18"	1.75'	Full sun	Brilliant scarlet trumpetslate summer into fall.
1	Zizophora clinopodioides	Blue Mint Bush	18" x 18"	1.75'	Sun to part shade	Blue, thyme-like flowers cover plant in summer. Foliage is dull green. Fragrant.
2	Alcea rosea	Hollyhocks	3-6' x 3'	7'	Full sun	Simple flowered forms are more heat and drought tolerant. Tall spires of flowers in magenta to apricot.
2	Alchemilla mollis	Lady's Mantle	12-18" x 15"	1'	Part shade	Round foliage with felt like texture; chartreuse flower in late spring.
2	Aquilegia caerulea	Rocky Mountain Columbine	24" x 18"	1.75'	Part shade	Blue and whit flowers. The more sun, the more water it needs. Utah native.
2	Aquilegia chrysantha	Golden Columbine	2' x 2'	3'	Sun to part shade	Yellow flower. The more sun the more water it needs.
2	Aquilegia formosa	Western Columbine	18" x 24"	3'	Full sun to part shade	Utah native. Yellow petals with orange-red sepals. More drought tolerant than most other columbine.
2	Armeria maritima	Common Thrift	6" x 12"	.75'	Sun to part shade	Rose pink ball-like flowers; grass-like foliage. Might need more water in heat of summer.
2	Baptisia australis	False Indigo	3-4' x 4'	12.5'	Sun to part shade	Indigo-blue flowers in mid to late spring on long racemes; seed pods are shiny black. Foliage is pea-like and blue green. Slow to establish.
2	Bergenia cordifolia	Bergenia, Saxifrage	12" x 12"	.75'	Part to full shade	Large, oval leaves are persistent into winter; pink spring flower.
2	Campanula portenschlagiana	Dalmatian Bellflower	5-10" x 15"	1'	Morning sun to light shade	Bell shaped purplish flowersmid spring; dark green heart shaped foliage
2	Campanula rotundifolia	Bluebells-of-Scotland	6-12" x 12"	.75'	Part to full shade	Nodding, lavender blue flowers early summer to fall.
2	Dianthus gratianopolitanus	Garden Pinks	8" x 18"	1.75'	Sun to park shade	Gray or silver foliage; flower color varies with cultivar.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
2	<i>Dianthus pinifolius</i>	Pine-leaved Garden Pink	24" x 12"	.75'	Full sun	Blue-green foliage, very fine. Flowers are dark red.
2	<i>Echinacea angustifolia</i>	Prairie Purple Coneflower	36" x 18"	1.75'	Sun to part shade	Recurved petals are long and fine; prominent cone enjoyed by birds. Deer resistant.
2	<i>Echinacea paradoxa</i>	Ozark Coneflower	30-36" x 15"	1'	Sun to part shade	Yellow recurved petals. Deer resistant.
2	<i>Geranium endressii</i>	Endress Cranesbill	16-20" x 18-24"	3'	Part Shade	Deep pink flowers in early to mid summer.
2	<i>Geranium sanguineum</i>	Bloody Cranesbill	8" x 18"	1.75'	Sun to part shade	Magenta flowers in early summer. Green foliage turns orange in fall.
2	<i>Hemerocallis hybrid</i>	Daylily	1-6' x 1-3'	.75-7'	Sun to light shade	Wide variety of flower colors, heights. Useful for massing. Foliage is grass-like.
2	<i>Heuchera sanguinea</i>	Coral Bells	12" x 15"	1'	Part to full shade	Round, lobed foliage; slender stems with white to pink bell shaped flowers.
2	<i>Iberis sempervirens</i>	Candytuft	12" x 12"	.75'	Sun to light shade	Evergreen. Bright white flowers mid spring.
2	<i>Iris hybrids</i>	Bearded Iris;	1-3' x 2'	3'	Full to part sun	Flowers late spring to early summer; sword-like
2	<i>Liatris spicata</i>	Gayfeather	2-3' x 2'	3'	Full sun	Grass-like foliage and showy flower spikes in purple and violet
2	<i>Lychnis coronaria</i>	Rose Compion	36" x 24"	3'	Sun to light shade	Magenta flowers appear along woolly white stems. Leaves are silvery gray.
2	<i>Paeonia hybrida</i>	Peony	36" x 24"	3'	Sun to light shade	Wide range of flower colors and styles. Blooms late spring. Foliage is deeply lobed, attractive fall color.
2	<i>Papaver orientale</i>	Oriental Poppy	30" x 24"	3'	Sun to light shade	Papery flowers in mid spring in a variety of colors. Hairy basal foliage goes dormant in low water situations.
2	<i>Phlox subulata</i>	Creeping Phlox	6" x 12"	.75'	Sun to light shade	Low, matting foliage in light green; flowers appear in spring in a variety of colors.
2	<i>Rudbeckia fulgida</i>	Black Eyed Susan	3' x 2'	3'	Full sun	Deep golden flowers mid to late summer. Leaves are large, oval to heart shaped and glossy green.
2	<i>Rudbeckia nitida</i>	Orange Coneflower	2-4' x 3'	7'	Full sun	Smaller flowers than <i>R. fulgida</i> ; densely branched with many flowers mid summer. Good cutting flower.

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2	Rudbeckia occidentalis	Western Coneflower	4' x 2'	3'	Full sun	Utah native. Tall spire with brown cone, very small yellow petals. Utilized by finches and other perching birds.
2	Salvia chamaecyparissus	Germander Sage	18" x 24"	3'	Full sun	True blue flowers on spikes above green foliage. Foliage is evergreen during mild winters.
2	Salvia nemerosa	Plume-flowered	30" x 24"	3'	Full sun	Rosy purple flowers with fuzzy appearance, mid
2	Salvia superba	Garden Salvia	2-3' x 2'	3'	Full sun	Spries of flowers mid summer in purples, blues, and pinks; foliage typically dull green.
2	Saponaria ocymoides	Rock Soapwort	6" x 24"	3'	Sun to part shade	Pink or white spring flowers; fine textured foliage.
DECIDUOUS AND EVERGREEN SHRUBS						
0	Amorpha fruticosa	False Indigo	4' x 6'	28'	Full sun	Attractive, pinnate foliage; dense spires of purple flowers with yellow anthers.
0	Artemisia bigelovii	Bigelow's Sage	16" x 24"	3'	Full sun	Low growing sagebrush; light green color.
0	Artemisia cana	Silver Sage	2-3' x 3'	7'	Full sun	Thicker leaves than other sages. Native to intermountain area.
0	Artemisia filifolia	Sand Sage	3' x 2'	3'	Full sun	Feathery foliage. Utah native.
0	Artemisia frigida	Fringed Sage	14" x 14"	.75'	Full sun	Utah native. Silver foliage.
0	Artemisia nova	Black Sage	2' x 2'	3'	Full sun	Foliage lead-gray; flower spikes dry to dark brown. Utah native.
0	Artemisia tridentata	Big Basin Sage	4' x 4'	12.5'	Full sun	Utah native. Large shrub with aromatic foliage.
0	Atriplex canescens	Fourwing Salt Bush	2-6' x 4'	12.5'	Full sun	Evergreen, silvery green foliage. Excellent for dry medians. Tolerates saline and alkaline soils. Utah native.
0	Atriplex gardneri	Gardner Salt Bush	12" x 4'	12.5'	Full sun	Evergreen. Utah native.
0	Ceratoides lanata (also listed as Krascheninnikova lantana)	Winterfat	3' x 2'	3'	Full sun	Silvery white foliage; important winter forage. Utah native.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
0	<i>Cercocarpus intricatus</i>	Dwarf Mountain Mahogany	4-6' x 5'	19.5'	Full sun	Very dense, rounded form, tiny needle-like leaves. Utah native.
0	<i>Cercocarpus ledifolius</i>	Curl-leaf Mountain Mahogany	15' x 8'	50'	Full sun	Evergreen. Dark small foliage. Feathery seed plume. Utah native
0	<i>Cercocarpus montanus</i>	Mountain Mahogany	8' x 6'	28'	Full sun	Silver gray bark; thick dark green leaves. Utah native.
0	<i>Chamaebatiaria millifolium</i>	Fernbush	4' x 3'	7'	Full sun	Green, aromatic foliage; clusters of white flowers latesummer. Utah native.
0	<i>Cowania mexicana</i> (also listed as <i>Purshia mexicana</i>)	Cliff Rose	2-5' x 4'	12.5'	Full sun	Semi-evergreen. Potentilla-like flowers in late spring. Utah native.
0	<i>Ephedra viridis</i>	Mormon Tea	3' x 4'	12.5'	Full sun	Evergreen. Unusual shrub with bright green bark and insignificant foliage. Utah native.
0	<i>Fallugia paradoxa</i>	Apache Plume	4' x 4'	12.5'	Full sun	Delicate, white flowers followed by mauve colored, fluffy seed heads. Utah native.
0	<i>Forestiera neomexicana</i>	New Mexico Privet	15' x 10'	78.5'	Full sun	Interesting multi-stemmed small tree. Black fruit enjoyed by birds. Utah native.
0	<i>Hippophae rhamnoides</i>	Sea Buckthorn	8-18' x 12'	113'	Full sun	Informal shrub; small greenish flower; orange, edible fruit on female plants. Good for wildlife.
0	<i>Holodiscus dumosus</i>	Rock Spray Spriaea	3' x 4'	12.5'	Full to part sun	Graceful shrub with arching branches covered in spring with cream blossoms. Utah native.
0	<i>Jamesia americana</i>	Cliff Jamesia	3' x 5'	19.5'	Full to part sun	White flowers spring and early summer. Utah native.
0	<i>Mahonia fremontii</i>	Fremont's Mahonia	4' x 4'	12.5'	Full sun	Evergreen, holly-like foliage. Yellow spring flowers. Utah native.
0	<i>Purshia tridentata</i>	Antelope Bitterbrush	6' x 6'	28'	Full sun	Trilobed leaves; yellow spring flower. Very attractive to deer. Utah native.
0	<i>Ribes cereum</i>	Squaw Currant	3' x 5'	19.5'	Full to part shade	Nice compact form; Small leaves, whitish pink flowers, red berries.
0	<i>Salvia dorrii</i>	Dorr's Sage	1-2' x 3'	7'	Full sun	Small, rounded white leaves are extremely aromatic. Purple-blue flower spires.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
0	Shepherdia argentea	Silver Buffaloberry	10' x 6'	28'	Full sun	Fine, silvery foliage, small yellow flowers; red edible fruit. Valuable as habitat and forage.
0	Yucca angustissima	Narrow leaf Yucca	5' x 2'	3'	Full sun	Narrow leaves in rosette; tall spires of creamy white flowers.
0	Yucca baccata	Datil Yucca	2' x 2'	3'	Full sun	Rosette of thick, sword-like leaves. Spires of creamy white flowers.
0	Yucca glauca	Spanish Bayonet	2' x 2'	3'	Full sun	Sword like leaves; creamy white flowers.
0	Yucca filamentosa	Adam's Needle	3-6' x 3'	7'	Full sun	Broad, sword-like leaves; some forms are variegated. Flowers appear along tall stalk mid summer.
0	Yucca harrimaniae	Harriman's Yucca	12" x 12"	.75'	Full sun	Sword-like foliage has threads along edges; tall spire up to 3 feet.
0	Yucca utahensis	Utah Yucca	8' x 5'	19.5'	Full sun	Stately yucca producing multiple flower stems.
1	Amelanchier utahensis	Utah Serviceberry	4'-8' x 6'	28'	Sun to shade	Utah native. Smaller leaves, denser habit than other serviceberry.
1	Arctostaphylos patula	Greenleaf Manzanita	5-6' x 8-10'	50'	Sun to light shade	Green leathery leaves; urn shaped pinkish floers in spring; deep reddish wood.
1	Caragana arborescens	Siberian Pea Shrub	10' x 6'	28'	Full sun	Yellow spring flower; lime green foliage with yellow fall color.
1	Caragana pygmaea	Pygmy Pea Shrub	3' x 4'	12.5'	Full sun	Fine textured foliage; yellow spring flower.
1	Forsythia sp.	Forsythia	6' x 6-8'	50'	Sun to light shade	Early yellow flowers on arching stems. Reddish fall color.
1	Hibiscus syriacus	Confederate Rose, Rose Of Sharon	8' x 8'	50'	Sun to light shade	Late summer flowers in a variety of colors. Needs more water in full sun.
1	Juniperus ssp.	varies	varies	varies	Full sun	Evergreen. Some varieties, such as J. scopulorum can be grown in water zone 0. Foliage is salt intolerant.
1	Mahonia aquifolium	Oregon Grape	10' x 10'	78'	Part to full shade	Evergreen leaves are holly-like. Fragrant yellow spring flowers followed by edible dark berries.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	Mahonia compacta	Compact Oregon Grape	4-5' x 4'	12.5'	Part to full shad	Evergreen holly-like leaves; fragrant yellow spring flowers; dark edible berries.
1	Pachistima myrsinites (may also be listed as Paxistima)	Mountain Lover	3' x 4-5'	20'	Part to full shade	Evergreen with boxwood-shaped leaves that turn red in winter. Wellow spring flowers, green berries. Utah native.
1	Potentilla fruticosa	Shrubby Cinquefoil	3' x 3'	7'	Full sun	Many varieties with flower color in white, yellow, and red. Summer blooming.
1	Prunus besseyi	Western Sand Cherry	5' x 5'	19.5'	Full sun	Dull, dark green foliage, white spring flowers, edible fruit. Spreading, open habit. Wood is prone to splitting, needs regular pruning.
1	Rhamnus frangula 'Columnaris'	Tallhedge Buckthorn	10-12' x 4'	12.5'	Sun to part shade	Tall narrow shrub with glossy foliage turning yellow in fall, insignificant greenish flowers turning into attractive dark berries.
1	Ribes aureum	Golden Currant	4' x 4'	12.5'	Part to full shade	Yellow spring flowers; red berries provide forage. Utah native.
1	Rosa foetida 'Bicolor'	Austrian Copper Rose	6-8' x 8'	50'	Full sun	Yellow flowers turn coppery red; very hardy and very thorny.
1	Rosa glauca (also listed as R. rubrifolia)	Redleaf Rose	6-7' x 4-6'	20'	Sun to part shade	Reddish foliage (gray green in shade); simple rose pink flower early summer; dark red hips; red-orange fall color.
1	Rosa x harisonii	Harison's Yellow Rose	2-5' x 4-6'	28'	Full sun	Bright yellow spring blossoms followed by showy black hips. Thorns.
1	Rosa woodsii	Woods Rose	5' x 5'	20'	Sun to part shade	Delicate pink spring blossoms; large red hips persist into winter. Utah native.
1	Rubus deliciosus	Rubus deliciosus	4-6' x 5-8'	28'	Sun to part shade	Large, single, white rose like flower in early summer; foliage bright green with yellow fall color. Vase-shaped shrub.
1	Symphoricarpos x chenaultii	Chenault Coralberry	3-4' x 4-6'	20'	Sun to part shade	Delicate, bluish green foliage; clusters of pinkish flowers followed by colorful purple berries that persis into winter.
1	Symphoricarpos oreophilus	Mountain Snowberry	2-5' x 3-5'	19.5'	Full to part sun	Vase shaped shrub, light gray leaves, pink bell shaped flowers. Snowy white berries persist into winter. Utah native.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	<i>Syringa vulgaris</i>	Common Lilac (many cultivars)	8-20' x 10-15'	176'	Full sun	Spring flowers, sometimes fragrant. Allow for good air circulation to reduce or avoid powdery mildew.
2	<i>Alnus incana</i> ; <i>A. tenuifolia</i>	Thinleaf Alder	15' 10'	78'	Full to part sun	Smooth gray bark; glossy leaves.
2	<i>Amelanchier alnifolia</i>	Saskatoon Serviceberry	6-15" x 8'	50'	Sun to shade	Utah native. White spring flowers, edible fruit, silvery bark, red fall color.
2	<i>Aronia arbutifolia</i>	Red Chokeberry	6-8' x 4-5'	19.5'	Sun to light shade	White spring flowers, glossy leaves, red berries.
2	<i>Aronia melanocarpa</i>	Black Chokeberry	8' x 6'	28'	Sun to light shade	White spring flowers, glossy foliage, black berries. Red fall color and persistent fruit. Attractive hedge or foundation plant.
2	<i>Berberis</i> sp. (screening varieties)	Mentor Barberry, Red Leaf Barberry, Rose Glow Barberry	5'-6' x 4'-6'	28'	Sun to light shade	Rounded, dense shrubs with small round leaves in yellow, red, or green depending on variety. Not well suited for south or west facing walls. Has thorns.
2	<i>Berberis thunbergii</i> 'Crimson Pygmy'	Crimson Pygmy Barberry	2' x 2'-4'	12.5'	Sun to light shade	Rounded dense shrub with red foliage. Not well suited for south or west facing walls. Has thorns.
2	<i>Buddleia</i> sp.	Butterfly Bush	4-8' x 4-10'	12.5 – 78'	Sun to light shade	Upright and arching shrubs with late summer flowers similar to lilacs. Gray to green foliage.
2	<i>Caryopteris x clandonensis</i>	Blue Mist Spirea	2-3' x 4'	12.5'	Full sun	Grayish green foliage; blue flowers in late summer. Most attractive when cut back hard in late winter.
2	<i>Chaenomeles japonica</i>	Flowering Quince	6' x 8"	50'	Sun to light shade	Very early flowers, rose to apricot; soft green foliage. May be prone to chlorosis.
2	<i>Cotoneaster acutifolia</i>	Peking Cotoneaster	8-10' x 8-10'	78'	Sun to light shade	Deciduous shrub with glossy green leaves, small white summer flowers, red fall berries.
2	<i>Cotoneaster apiculata</i>	Cranberry Cotoneaster	3' x 4'	12.5'	Sun to light shade	Rounded dense shrub, dark glossy leaves, white flowers, red berries.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
2	Cotoneaster divaricata	Spreading Cotoneaster	5' x 8'	50'	Sun to light shade	White spring flower; red summer fruit; small round dark leaves have orange fall color.
2	Cytisus scoparius	Scotch Broom	4-6' x 6'	28'	Full sun	Yellow spring flower; bright green stems provide winter interest.
2	Daphne cneorum	Rose Daphne	3' x 4'	12.5'	Light shade	Evergreen spreading shrub with narrow dark leaves. Clusters of white to pink, fragrant flowers in spring.
2	Euonymus alata	Winged Euonymus	8' x 10'	78'	Sun to light shade	Large rounded shrub with dull green leaves and fiery red fall color. Interesting corky bark. In full sun requires more water.
2	Euonymus alata 'Compacta	Dwarf Winged Euonymus	5' x 5'	20'	Sun to light shade	Bright green spring foliage darkens in summer; turns fiery red in fall. Needs more water in full sun.
2	Kolkwitzia amabilis	Beauty Bush	8' x 8'	50'	Sun to part shade	Pink flowers in early summer; upright, arching stems form dense round shrub.
2	Prunus x cistena	Purple Sand Cherry	6-8' x 8'	50'	Sun to part shade	Dark purple leaves; white fragrant spring flower. Needs regular pruning to prevent breakage.
2	Physocarpus opulifolius	Ninebark	5' x 6'	28'	Sun to light shade	White May flowers followed by red pods. Yellow fall color. Attractive exfoliating bark.
2	Physocarpus opulifolius 'Diabolo'	Diabolo Ninebark	8-10' x 8-10'	78'	Sun to light shade	Dark, reddish purple foliage; white spring flower. Best color in full sun.
2	Ptelea trifoliata	Hoptree	20' x 15'	176'	Part to full shade	Fragrant green flowers. Will grow in dense shade.
2	Rosa meideland	Meideland Rose	2-3' x 6'	28'	Full sun	Everblooming shrub roses with low profile. White, pinks and reds available. Has thorns.
2	Rosa rugosa	Rugosa Rose	4-6' x 6-8'	28 - 50'	Full sun	Tough roses in a wide range of sizes and colors. Tend to be bushier than hybrids. Many have attractive rose hips. Has thorns. Is salt (ice-melt) tolerant.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
2	<i>Sambucus caerulea</i>	Elderberry	8-10' x 8'	50'	Full to part sun	Lacy white flowers in spring; edible blue berries in late summer; attractive to wildlife. The more sun it receives, the more water it needs.
2	<i>Spiraea x bumalda</i>	Bumald Spirea	2-5' x 4-6'	12.5 – 28'	Sun to light shade	Clusters of early summer blooms, mostly in pinks and white. Some have colorful foliage.
2	<i>Spiraea x vanhouttei</i>	Bridal Wreath Spirea	8' x 10'	78'	Sun to light shade	Cascades of white flowers late summer. Graceful arching habit. Red fall color.
2	<i>Symphoricarpos albus</i>	Common Snowberry	4' x 5'	19.5'	Part to full shade	Tubular white flowers followed by white berries that are persistent into winter.
2	<i>Symphoricarpos orbiculatus</i>	Indiancurrant Coralberry	3' x 6'	28'	Part to full shade	Small, soft green leaves on arching branches. Deep pink fruit forms in late summer and persists into winter.
2	<i>Symphoricarpos occidentalis</i>	Wolfberry	1-3' x 5'	19.5'	Part to full shade	Tubular pinkish flowers; forms colonies.
2	<i>Syringa patula</i>	Dwarf Korean Lilac	3' x 4'	12.5'	Full sun	Late spring purple flowers; leaves smaller than on <i>S. vulgaris</i> . Makes a nice hedge.
2	<i>Taxus x media 'Densiflora'</i>	Dense Yew	3-4' x 4-6'	28'	Part to full shade	Evergreen shrub with rounded dense form. Not suited for west of south facing walls. May need more water to reach establishment.
2	<i>Viburnum lantana</i>	Wayfaring Tree	10-15' x 10-15'	176'	Sun to part shade	White spring flower clusters; leathery green leaves turn maroon in fall; summer berry attractive to birds.
2	<i>Viburnum rhytidophyllum</i>	Leatherleaf Viburnum	10-12' x 10-15'	78'	Part to full shade	Yellowish flowers mid May; dark leathery foliage. Tolerates dense shade.
DECIDUOUS TREES						
0	<i>Celtis occidentalis</i>	Common Hackberry	50' x 40'	1256'	Full to part sun	Elm-like foliage; upright arching branches. Thick, knobby bark. Tolerates urban air pollution. Good for parking islands.
0	<i>Celtis reticulata</i>	Netleaf Hackberry	20-30' x 20'	20'	Full to part sun	Utah native; interesting warty bark.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
0	<i>Fraxinus velutina</i>	Velvet Ash	40' x 30'	706'	Sun to light shade	Thick leaves finely serrated; gray furrowed bark. Tolerant of high pH soils and heat.
0	<i>Koelreuteria paniculata</i>	Goldenrain Tree	25' x 25'	490'	Full sun	Tolerates alkaline and poor soils. Yellow flower clusters in midsummer followed by lantern-shaped seed pods. Do not water late into the fall as the tree will not go dormant.
0	<i>Quercus gambelii</i>	Gambel Oak; Scrub Oak	15-20' x 15-20'	176'	Full sun	Native oak has persistent winter foliage. Important habitat and forage plant. Utah native.
0	<i>Robinia pseudoacacia</i>	Black Locust; Pioneer Tree	50' x 30'	706'	Full sun	Tough tree well suited to harsh sites. Fragrant white late spring flower.
1	<i>Acer campestre</i>	Hedge Maple	20' x 30'	706'	Full to part sun	Dense and rounded maple with thick, dark leaves. Yellowish fall color. Tolerant of alkaline soils.
1	<i>Acer grandidentatum</i>	Bigtooth Maple	20' x 20'	314'	Part to full sun	Thick, dark green leaves remain attractive throughout summer. Yellow to red fall color. Utah native.
1	<i>Acer tataricum</i>	Tatarian Maple	20' x 15-20'	176'	Sun to light shade	Shrubby maple, alternative to Amur Maple. Attractive red fruit. Orange to red fall color.
1	<i>Amelanchier alnifolia</i>	Saskatoon Serviceberry	15' x 10-15'	176'	Sun to shade	White spring flower followed by black edible fruit. Yellow to red fall color. Utah native.
1	<i>Amelanchier arborea</i>	Downy Serviceberry	15- x 10-15'	176'	Sun to shade	Red brown to dark gray bark; white spring flowers; edible fruit. Orange fall color. Good alternative to Aspen.
1	<i>Amelanchier x grandiflora</i>	Juneberry	20' x 15'	176'	Sun to shade	Multi-stemmed tree with soft green leaves and white spring fruit. Orange to red fall color. Good substitute for Aspen.
1	<i>Cercis occidentalis</i>	Western Redbud	10-12' x 12'	113'	Sun to light shade	Rosy purple spring flowers round leaves. More heat tolerant than <i>C. canadensis</i> . May shed leaves in mid-summer under stress.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	Fraxinus mandshurica	Manchurian Ash	40-50'	20'	314'	Dense, oval crown. Glossy dark leaves. Yellow fall color.
1	Ginkgo biloba	Ginkgo (Males Only)	50' x 30'	706'	Full sun	Upright tree with distinctive fan-shaped leaves. Yellow fall color. Slow to establish, but a worthy tree.
1	Gymnocladus dioicus	Kentucky Coffeetree	50' x 25'	490'	Full sun	Erect, rounded crown. Greenish white fragrant flowers. Double pinnately compound leaves turn deep yellow in fall. Pods provide winter interest. Tolerates alkaline, salt. Needs a large area to grow.
1	Quercus bicolor	Swamp White Oak	40-50' x 30-50'	1256'	Sun to light shade	Dark green leaves with light green to white velvety undersides. Tolerant of compacted or saline soils. Yellow to orange fall color. May retain foliage into winter months. Good in naturally wet areas.
1	Quercus macrocarpa	Burr Oak	50-80' x 50'	1962'	Full sun	Dark green leaves become yellow brown in fall. Broad and spreading with maturity.
1	Quercus muehlenbergii	Chinkapin Oak	40' x 30-50'	1256'	Full sun	Tolerant of alkaline soils.
1	Sophora japonica	Japanese Pagoda Tree	40' x 40'	1256'	Sun to light shade	Pea-shaped yellowish flowers late summer; fragrant; dark green leaflets; furrowed bark. Cease water in early fall. Not suited to exposed sites. Attractive to bees.
1	Ulmus parvifolia	Lacebark Elm	40' x 25'	490'	Full sun	Glossy green foliage turns orange to rust in fall. Exfoliating bark. Resistant to Dutch Elm Disease and phloem necrosis. Attractive exfoliating bark.
1	Zelkova serrata	Japanese Zelkova	40' x 25'	490'	Sun to light shade	Vase shaped tree with finely serrated leaves turning yellow to bronze in the fall.
2	Acer ginnala	Amur Maple	15-20' x 15'	176'	Full to part sun	Medium green leaves; yellow to red fall color. Best as multi-stemmed tree.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
2	Acer glabrum	Rocky Mountain Maple	15-20' x 6-10'	78'	Full to part sun	Attractive, multi-stemmed maple has smooth gray bark and deeply lobed leaves. Deep yellow fall color.
2	Acer pseudoplatanus	Sycamore Maple	50' x 30'	706'	Full sun	Dark green leaf with lighter underside. Gray to brown platy bark exfoliates to reveal orange bark underneath. May be subject to chlorosis.
2	Aesculus glabra	Ohio Buckeye	25' x 25'	490'	Sun to part shade	Avoid planting where trees will be subject to reflected heat. Whitish green panicles followed by large, inedible fruit. Fruit is toxic if eaten.
2	Catalpa speciosa	Western Catalpa	40-70' x 30'	706'	Full sun	Large, trumpet shaped fragrant flowers in early summer; large soft green leaves; yellow fall color.
2	Cercis canadensis	Eastern Redbud	25' x 20'	314'	Sun to light shade	Reddish purple pea-like flowers in spring; round glossy foliage. In full sun may need more water.
2	Cercis reniformis	Mexican Redbud	20' x 20'	314'	Sun to light shade	Rosy pink flowers in spring; leaves are large, round and slightly ruffled. Reddish brown seed pods. More heat tolerant than C. canadensis.
2	Corylus colurna	Turkish Filbert	20-30' x 15-20'	176'	Full sun	Prefers well drained soils, is pH adaptable. Heat tolerant.
2	Crataegus crus-galli v inermis	Thornless Hawthorn	20' x 20'	314'	Full to part sun	White spring flowers; red fall fruit; red fall color.
2	Fraxinus anomala	Singleleaf Ash	6-10' x 10'	78'	Sun to shade	Dark green, single leaves; upright habit. Drought and heat tolerant.
2	Ptelea trifoliata	Hop Tree	15-20' x 20'	314'	Sun to shade	Fragrant, greenish white flowers in early summer; glossy green foliage; adaptive to dry shade.
2	Syringa reticulata	Japanese Tree Lilac	25' x 20'	314'	Full sun	Creamy white flowers early summer; later than other lilacs; yellow fall color. Tolerant of heat and winds.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
2	Tilia tomentosa	Silver Linden	50' x 25'	314'	Full sun	Leaves are dark green on top, silvery white underneath. Yellow fragrant flower early summer. Tolerates heat and drought better than other lindens. Requires large area.
EVERGREEN TREES						
0	Juniperus osteosperma	Utah Juniper	15' x 10'	78'	Full sun	Very cold, drought, and heat resistant, and adaptive to a wide range of soils. Generally smaller than J. scopulorum.
0	Juniperus scopulorum	Rocky Mountain Juniper	20' x 10'	20'	Full sun	Utah native. Utilized by birds for food and shelter.
0	Pinus aristata	Bristlecone Pine	15-20' x 10-15'	176'	Full sun	Utah native. Interesting pine with contorted form. Slow growing. Does not belong in lawn areas.
0	Pinus edulis	Pinyon Pine	20-30' x 10-20'	15'	Full sun	Twigs orange to brown; edible seeds. Utah native.
0	Pinus monophylla	Single-needled Pine	30' x 20'	314'	Sun to light shade	Utah native. Needles borne individually on twig.
0	Pinus ponderosa	Ponderosa Pine	80' x 25'	490'	Full sun	Pyramidal to irregular habit. Needles dark to yellowish green. Bark is brownish black to cinnamon red with deep fissures. Utah native. Needs large open space. Shade intolerant.
1	Calocedrus decurrens	Incense Cedar	30-50' x 10'	78'	Sun to light shade	Evergreen with feathery plates. Exfoliating bark. Fragrant. Fairly heat tolerant.
1	Cedrus atlantica glauca	Blue Atlas Cedar	40-60' x 30'	706'	Sun to part shade	Pyramidal form, blue to gray green in color.
1	Pinus flexilis	Limber Pine	25-35' x 20'	314'	Full sun	Long needles; bluish green. Utah native. "Vanderwolf Pyramidal" is narrower than species.
1	Pinus heldreichii leucodermis	Bosnian Red Cone Pine	40-50' x 20'	314'	Sun to part shade	Glossy green needles; pyramidal form.
1	Pinus nigra	Austrian Pine	50' x 25'	490'	Full sun	Broad, dense; dark green.

WATER ZONE	BOTANICAL NAME	COMMON NAME	MATURE SIZE H x W	AREA VALUE (sq ft)	LIGHT	COMMENTS
1	<i>Pinus strmis</i>	Western White Pine	40-50' x 20'	314'	Full sun	Nice blue-green color.
1	<i>Pinus sylvestris</i>	Scotch Pine	60' x 25'	490'	Sun to light shade	Pyramidal in youth, broad canopy in maturity. Older bark is orange.
2	<i>Picea abies</i>	Norway Spruce	60' x 25'	490'	Sun to light shade	Dark green needles; pyramidal form with drooping branches.
2	<i>Picea pungens v. glauca</i>	Colorado Blue Spruce	30-60' x 20'	314'	Sun to light shade	Blue or green foliage; pyramidal form. Utah native. Can be wind prone.
2	<i>Pseudotsuga menzeisii</i>	Douglas Fir	70' x 20'	314'	Full sun	Dark green needles; branches droop slightly; fragrant foliage. Utah native.

Firewise Plants for Utah Landscapes

Developments located adjacent to natural open spaces, shall provide drought-tolerant plants which blend with the native vegetation and are fire resistant or fire retardant and non-invasive per the landscaping section of the Zoning Ordinance. The attached list is from Utah State University. This list has been provided to provide suggestions into creating fire safe landscaping area.

Utah Forest Facts

UtahStateUniversity
COOPERATIVE EXTENSION

Wildland-Urban Interface

NR/FF/002

Firewise Plants for Utah Landscapes

Mike Kuhns, State Extension Forester

This fact sheet describes characteristics of firewise plants and firewise landscapes, and lists examples of firewise plants that can be used in Utah landscapes.

Wildland/Urban Interface Fire Hazards

Fire is an important part of many of Utah's natural landscapes, including landscapes in fringe or interface areas near rapidly growing cities, towns, and recreational developments. But when people build homes in these areas, a minor fire that might have burned a few trees and shrubs in a natural area instead can become a major disaster. Throughout Utah wildland/urban interface fires are becoming more of a problem as people choose to live in previously undeveloped areas on the edges of cities, areas with trees, shrubs, and grasses that often are very flammable.

Firewise Landscaping

Firewise landscaping is the practice of designing, installing, and maintaining a landscape to minimize fire hazard to structures, residents, and neighbors, while maintaining components of the native ecosystems that attracted people to live in such areas in the first place. Such landscaping uses appropriate plants, then places and maintains them so that fuel loads decrease in zones between an area to be protected (like your home) and the surrounding wildland.

Use of firewise plants alone does not guarantee fire safety for you or your home. But, firewise plants coupled with good design and maintenance help establish a defensible space around your home or neighborhood that assists firefighters in their protection efforts. Native vegetation around homes and neighborhoods also can be managed in a firewise manner through pruning, thinning, and occasional clearing.

This fact sheet mainly covers selection of firewise plants for use in Utah landscapes. Other elements of firewise landscape design, installation, and maintenance will be covered in other fact sheets. Go to http://extension.usu.edu/forestry/HomeTown/HO_Firewise.htm for an electronic version of this fact sheet and a slide presentation showing most of these plants.



House in dense Gambel oak stand

Firewise Plant Characteristics

Firewise plants have a number of characteristics in common, but also can vary considerably. Following are some important points about these plants and their management.

✓ *No plant is fireproof. All will burn in a very intense fire.*

✓ Firewise plants all have one or more of these firewise characteristics:

✗ Tissues contain more moisture, especially during the fire season.

✗ Tissues contain low amounts of volatile oils and other readily flammable chemicals.

✗ Plants provide less fuel, either by producing less litter or by staying small.

✗ Plants are compact or low to the ground, allowing them to be used in the landscape to interrupt fire pathways.

✓ All trees provide large amounts of fuel to a fire, so they should be carefully placed and maintained. Broadleaved trees generally are less flammable than conifers (pines, firs, spruces, junipers).

✓ Most of the firewise plants listed in this publication do well in open, sunny areas typical of most fire-prone sites.

✓ Some firewise plants need minimal or no irrigation to remain green and healthy; over-irrigation may harm such plants or may cause them to grow too fast and become hazardous. Other plants will need supplemental water to survive. Know your plants' needs and habits so you can use and manage them appropriately.

✓ When choosing a particular plant species or cultivar for a firewise planting, favor those that are low to the ground, compact, and that stay green and healthy with low maintenance and minimal water.

✓ All firewise plants should receive periodic maintenance, including removal of dead leaf and stem material within the crown and on the ground, pruning to keep crowns thinner and to keep tree crowns high, and removal of individual plants to break up fuel continuity.

✓ Make sure that the plants you are considering are cold-hardy (check the USDA hardiness zone for the plant and compare it to the zone for your area) and otherwise well-suited for your locale and the specific planting site.

✓ Some plants are weedy and may even be illegal to plant or cultivate.

Firewise Plants for Utah Landscapes

The following table lists plants and groups of plants that can be firewise if used properly in the landscape and properly maintained. Plants or groups of plants marked with an * can become weedy in certain circumstances, and may even be noxious weeds with legal restrictions against their planting and cultivation. Check with your local Extension office or State Department of Agriculture office for information on noxious weeds in your area.

Most of these plants are fairly commonly available in the nursery trade, and cultivars and hybrids usually are available. All of these plants should be cold-hardy in most of Utah (USDA hardiness zones 4 or 5). Some need considerable supplemental irrigation, while others need very little water. Be sure to learn about the plants you use and know their requirements.

Where no particular species or cultivar is listed, or when considering plants not listed here, pick one that has firewise characteristics as described above. Don't assume that a plant is firewise just because it is closely related to one in the list or because it has a similar name.

<u>Botanical Name</u>	<u>Common Name</u>
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Grasses

Agropyron cristatum Crested Wheatgrass

◆ resists fire spread due to growth form

Buchloe dactyloides Buffalograss

◆ low growing without mowing; moist through summer with minimal irrigation

Dactylis glomerata Orchardgrass

◆ must be mowed or grazed

Festuca cinerea and other species Blue Fescue

◆ most low growing; may need to mow; stays moist with irrigation

Lolium species Rye Grass

◆ stays green with less irrigation than some; need to mow or graze

Pascopyrum smithii Western Wheatgrass

◆ low fuel loads; regrows quickly after fire

Poa pratensis Kentucky Bluegrass

◆ low growing; may need to mow; stays moist with irrigation

Poa secunda Sandberg Bluegrass

◆ low growing without mowing; low fuel loads

Herbaceous Perennials

Achillea clavennae Silvery Yarrow

◆ small plants for dry sites

Botanical Name	Common Name
<i>Achillea filipendulina</i>	Fernleaf Yarrow
♦large; likes dry sites; moist in summer	
<i>Achillea</i> —other species & hybrids	Yarrow*
♦some are volatile; good for dry sites	
<i>Aquilegia</i> species & hybrids	Columbine
♦likes moisture and some shade	
<i>Armeria maritima</i>	Sea Pink, Sea Thrift
♦low growing; dry, infertile sites only; salt tolerant	
<i>Artemisia stelleriana</i>	Beach Wormwood, Dusty Miller
♦needs very well-drained soil; moist in summer	
<i>Artemisia</i> —other species & hybrids	Various names*
♦some are volatile; all like dry soils	
<i>Bergenia</i> species & hybrids	Bergenia
♦moisture loving; medium-sized; semi-evergreen	
<i>Centranthus ruber</i>	Red Valerian, Jupiter's Beard
♦gets fairly large; moist in summer	
<i>Cerastium tomentosum</i>	Snow-in-summer
♦low growing; moist in summer	
<i>Coreopsis auriculata</i> var. <i>Nana</i>	Dwarf Mouse Ear Coreopsis
♦needs moisture; fairly low growing	
<i>Coreopsis</i> —other perennial species.....	Coreopsis
♦more drought tolerant; larger plants	
<i>Delosperma nubigenum</i>	Hardy Ice Plant
♦also other ice plants; very drought tolerant; low growing	
<i>Dianthus plumarius</i> & others.....	Pinks
♦use perennials; needs moisture; moist in summer	
<i>Erigeron</i> hybrids	Fleabane*
♦moist through summer	
<i>Gaillardia x grandiflora</i>	Blanketflower
♦drought, heat tolerant; moist in summer; large	
<i>Geranium cinereum</i>	Hardy Geranium
♦low growing; cool sites	
<i>Geranium sanguineum</i> ..	Bloody Cranesbill, Bloodred Geranium
♦low/medium growing; partial shade or sun	
<i>Geranium</i> species.....	Geranium
♦use perennials; most low growing; need shade where hot	
<i>Hemerocallis</i> species.....	Daylily
♦green and moist through summer	
<i>Heuchera sanguinea</i>	Coral Bells, Alum Root
♦also other species, hybrids; low growing foliage	
<i>Iberis sempervirens</i>	Evergreen Candytuft
♦fairly low growing; evergreen	
<i>Iris</i> species & hybrids	Iris
♦green and moist through summer	
<i>Kniphofia</i> species & hybrids	Red-hot Poker
♦large plants; moist in summer	
<i>Lavandula</i> species.....	Lavender
♦moist in summer; compact; cut to ground regularly	
<i>Leucanthemum x superbum</i>	Shasta Daisy
♦green and moist through summer	

Botanical Name	Common Name
<i>Limonium latifolium</i>	Sea-lavender, Statice
♦low growing leaves; salt resistant; dry soils	
<i>Linum</i> species.....	Flax
♦good for tough sites & soils	
<i>Liriope spicatum</i>	Lily-turf
♦fairly low growing; moist or dry sites; evergreen	
<i>Lupinus</i> species & hybrids.....	Lupine*
♦some are annuals; poisonous to livestock; good for poor soils	
<i>Medicago sativa</i>	Alfalfa
♦green & moist through summer; low growing	
<i>Oenothera</i> species.....	Primrose
♦fairly low growing; best on poor soils	
<i>Papaver</i> species	Poppy
♦easy to grow; cut back regularly	
<i>Penstemon</i> species & hybrids	Penstemon
♦use on well-drained soils	
<i>Perovskia atriplicifolia</i>	Russian Sage, Azure Sage
♦moist through summer; cut back yearly	
<i>Potentilla nepalensis</i>	Nepal Cinquefoil
♦prostrate form	
<i>Potentilla neumanniana</i> 'Nana' (<i>P. verna</i>)	Spring Cinquefoil, Creeping Potentilla
♦very low growing	
<i>Potentilla</i> —other non-shrubby species & hybrids.....	Cinquefoil, Potentilla*
♦sulfur cinquefoil is weedy; full sun; moist through summer	
<i>Salvia</i> species & hybrids.....	Salvia, Sage*
♦some are annuals; Mediterranean sage is weedy; only use low growing, small plants	
<i>Sedum</i> species	Stonecrop, Sedum
♦very low growing; fleshy, moist leaves; drought tolerant	
<i>Sempervivum tectorum</i>	Hen and Chicks
♦very low growing; succulent; good on droughty, poor soils	
<i>Sibbaldiopsis (Potentilla) tridentata</i>	Wineleaf Cinquefoil
♦prostrate, spreading form	
<i>Stachys byzantina</i>	Lamb's Ear
♦moist through summer; good on poor soils	
<i>Yucca filamentosa</i>	Yucca
♦evergreen; very drought tolerant	

Shrubs and Woody Vines

<i>Arctostaphylos uva-ursi</i>	Bearberry, Kinnikinnick, Manzanita
♦very low and spreading; evergreen; use on poor soils; needs little pruning; salt tolerant	
<i>Atriplex</i> species	Saltbush
♦very drought tolerant; low maintenance	
<i>Ceanothus americanus</i>	New Jersey Tea
♦low, dense form; evergreen; fairly trouble free; drought tolerant	

Botanical Name	Common Name
<i>Ceanothus ovatus</i> (<i>C. herbaceus</i>) & others	Ceanothus
♦fairly low growing; evergreen; low maintenance	
<i>Cistus</i> species.....	Rock-rose
♦not all are cold hardy; evergreen; dry sites; size varies	
<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster
♦low growing; evergreen; minimal maintenance; dry sites	
<i>Cotoneaster horizontalis</i>	Rockspray or Rock Cotoneaster
♦very low and spreading; evergreen	
<i>Cotoneaster</i> —other compact species.....	Cotoneaster
♦low growth form; low maintenance; tough	
<i>Hedera helix</i>	English Ivy
♦evergreen vine; low growing, spreading, climbing; prune to control spread; sun or shade	
<i>Kochia prostrata</i>	Immigrant Forage Kochia
♦stays green; no volatiles; clumps break up fuel continuity; don't use weedy annual kochia	
<i>Lonicera</i> species & hybrids	Honeysuckle
♦shrubs or vines; use low growing species, cultivars	
<i>Mahonia repens</i>	Creeping Oregon Grape
♦very low growing, spreading shrub; evergreen; needs some shade	
<i>Parthenocissus quinquefolia</i>	Virginia Creeper
♦vine; tough and vary adaptable; prune to control spread	
<i>Prunus besseyi</i> (<i>P. pumila</i> var. <i>besseyi</i>)	Western Sandcherry
♦small, spreading shrub for dry, tough sites	
<i>Purshia tridentata</i>	Bitterbrush, Antelope Bitterbrush
♦low maintenance; good for tough, dry sites	
<i>Pyracantha</i> species	Firethorn, Pyracantha
♦evergreen shrub; use low growing selections; prune regularly	
<i>Rhamnus</i> species	Buckthorn
♦tough shrub; low maintenance	
<i>Rhus trilobata</i>	Skunkbush Sumac
♦easy to grow shrub; fairly small; low maintenance	
<i>Rhus</i> —other species.....	Sumac
♦fairly tough and drought tolerant; some get large; thin or prune periodically	
<i>Ribes</i> species	Currant, Gooseberry
♦use low growing dwarf forms; fairly tough, adaptable	
<i>Rosa rugosa</i> & other hedge roses	Rugosa Rose
♦medium shrub; tough, fairly drought and salt tolerant	
<i>Shepherdia canadensis</i>	Russet Buffaloberry
♦does well on very poor soils; drought tolerant; fixes nitrogen; salt tolerant	

Botanical Name	Common Name
<i>Syringa vulgaris</i>	Lilac
♦small to large shrubs; stays green through summer with irrigation; thin and prune regularly	
<i>Vinca major</i>	Large Periwinkle
♦low growing, prostrate groundcover; sun or shade	
<i>Vinca minor</i>	Dwarf Periwinkle, Common Periwinkle
♦similar to large periwinkle, but very low to the ground	
Trees	
<i>Acer</i> species	Maple
♦needs supplemental moisture	
<i>Betula</i> species.....	Birch
♦needs supplemental moisture; use borer resistant selections	
<i>Cercis occidentalis</i> (<i>C. orbiculata</i>)	California Redbud
♦small tree or shrub; drought and heat resistant	
<i>Populus tremuloides</i>	Quaking Aspen
♦needs supplemental moisture; good if maintained in young clumps, otherwise not suitable for valleys	
<i>Populus</i> —other species.....	Poplar, Cottonwood
♦needs supplemental moisture; most need plenty of space	
<i>Salix</i> species	Willow
♦needs supplemental moisture; disease prone; some good shrubs	

For More Information

Kuhns, Michael 1998. *Trees of Utah and the Intermountain West*. USU Press, Logan, UT 84322-7800. 341pp.

Still, Steven M. 1994. *Manual of Herbaceous Ornamental Plants*. Stipes Publ., 10-12 Chester St., Champaign, IL 61820. 814 pp.

Visit the Forestry Extension Web site at <http://extension.usu.edu/forestry/> for fire safety information. Also, go to www.firewise.org and www.utahfireinfo.gov for more fire-related information.

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Landscape Area and Water Conserving Landscaping Calculations Worksheet

Note: This worksheet applies to Multi-Family, Commercial and Industrial Developments and contains only general references to the adopted landscape code. It is the applicant's responsibility to consult the West Jordan Code for applicable requirements. (See Section 13-13, Landscaping Requirements of the West Jordan Code for Details)

Project: _____ Applicant: _____

Property Address: _____ Date _____

On-Site Landscaping

<u>Total Area</u>	<u>Total Percentage</u>
-------------------	-------------------------

- | | | |
|-------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| _____ | _____ | <p>Total on-site landscape area (including parking lot landscaping but excluding tree canopies and parkstrip landscaping)</p> <ul style="list-style-type: none"> • 40% minimum for Multi-Family Developments; §13-13-11; • 25% minimum for Business/Research Park Developments; §13-13-11; • 15% minimum for Commercial, Professional Office, and Non-Residential Development; §13-13-11; • 10% minimum for Manufacturing Developments; §13-13-11. |
| _____ | _____ | <p>On-site plant coverage including turf grass (excluding tree canopies).</p> <ul style="list-style-type: none"> • Shall cover no less than 40% of the ground surface at maturity §13-13-6. |
| _____ | _____ | <p>Turf grass in landscaped areas.</p> <ul style="list-style-type: none"> • Shall be no more than 25% of the total on-site landscaped area; §13-13-6. |
| _____ | _____ | <p>Plant coverage in detention basins</p> <ul style="list-style-type: none"> • No less than 50% of the detention basin area must be covered with groundcover, and/or turf at maturity §13-13-6. |
| _____ | _____ | <p>Hardscape material.</p> <ul style="list-style-type: none"> • No more than 60% of the total on-site landscape area may be covered by hardscape materials such as mulch, gravel, pavers and rock. |

_____ **Water-conserving shrubs, herbaceous, perennial, and ground cover plants** in landscaped areas that are on the *West Jordan Recommended Plant List*.

- No less than 75% of all shrubs, herbaceous, perennial, and ground cover plants must be on said list; §13-13-6.

_____ **Water-conserving trees** in landscaped areas that are listed on the *West Jordan Recommended Plant List*.

- No less than 75% of all trees must be on said list; §13-13-6.

Parking Lot Landscaping (See §13-13-9)

<u>Total</u>	<u>Total</u>
<u>Area</u>	<u>Percentage</u>

_____ **Parking lot landscaping**

- Either 1 shade tree per seven (7) parking spaces shall be provided within the parking lot or, if shade trees are not used, no less than 6% of all parking areas shall be landscaped.

Parkstrip Landscaping (See §13-13-8)

_____ **Parkstrip plant coverage** including turf grass (excluding tree canopies).

- Shall cover no less than 40% of the ground surface at maturity.

_____ **Turf grass** in landscaped parkstrip areas.

- Shall be no more than 25% of the total plant coverage.

_____ **Hardscape material**

- No more than 60% of the total parkstrip area may be covered by hardscape materials including mulch, gravel, pavers and rock.

_____ **Water-conserving shrubs, herbaceous, perennial, and ground cover plants** in landscaped areas that are on the *West Jordan Recommended Plant List*.

- No less than 75% of all shrubs, herbaceous, perennial, and ground cover plants must be on said list.

_____ **Water-conserving trees** in landscaped areas that are listed on the *West Jordan Recommended Plant List*.

- No less than 75% of all trees must be on said list.

Frontage # of Trees

_____ _____

Street trees

- 1 street tree required (from the *City of West Jordan Street Tree List*) for each 25' of curb frontage.

Landscape Buffer (See §13-13-10)

Landscape

Area # of Trees

_____ _____

Trees in the landscape buffer

- 1 tree required for each 400 sq. ft. of the area of the landscape buffer.

Water Allowance Worksheet

For all landscapes measuring over one thousand (1,000) square feet, the landscape designer shall prepare annual and monthly baseline landscape water allowances for use after the sixty (60) day plant establishment period, and provide copies to the city and property owner. The below formulas are examples of how the annual and monthly water allowance should be calculated.

- a. Annual water allowance (gallons) = $ET_o \times 1.0 \times 0.62 \times A$, where landscape water allowance is in gallons per year, and

ET _o	=	Reference evapotranspiration (31.18 inches per year in Salt Lake County)
1.0	=	ET _o adjustment factor, 100% turf grass ET _o (water year adjustment factor)
0.62	=	Conversion factor (to gallons per square feet)
A	=	Total irrigated landscape area in square feet

- b. Monthly water allowance (gallons) = $ET_o \times 1.0 \times 0.62 \times A$, using the following monthly ET_o values:

ET _o Values (Inches) For Monthly Water Allowance											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.00	0.00	0.00	3.36	4.59	5.40	6.21	5.60	3.72	2.30	0.00	0.00

Landscape Certification Worksheet

I, the undersigned landscape designer for this project in the City of West Jordan, certify that the landscaping and irrigation system have been installed according to the plans approved by the City. I understand that in the case of substantial deviations from approved plans the City may require removal and re-installation of landscaping or irrigation systems, at the developer's expense, in order to comply with the approved plans and the Municipal Code of the City of West Jordan.

Name of Project:
Address of Project:
Print name of Landscape Designer:
Signature of Landscape Designer:
Date:

Distribution Uniformity Audit Worksheet (For Turfgrass Areas)

I, the undersigned, am a Certified Landscape Irrigation Auditor (CLIA) with the Irrigation Association, and I certify that I have tested at least one “fixed spray head” zone (if any exist), and at least one “rotor spray head zone” (if any exist) and the distribution uniformity (DU) results are listed in the table below. The City of West Jordan requires a minimum of 60% DU for fixed head zones and 70% DU for rotor head zones.

In the case of substantial deviations from approved plans or failure to meet minimum distribution uniformity standards the City may require removal or alterations of irrigation systems, at the developer’s expense, in order to comply with the approved plans and the Municipal Code of the City of West Jordan.

Name of Project:
Address of Project:
Project includes FIXED head zones: Yes ___ No ___ Distribution Uniformity (%): _____
Project includes ROTOR head zones: Yes ___ No ___ Distribution Uniformity (%): _____
Print name of Certified Landscape Irrigation Auditor:
Signature of Certified Landscape Irrigation Auditor:
Date: