

Type	Size	Tolerance for stress	Growth rate	Power lines OK
C (coniferous)	S (under 20')	L (low)	L (less than 12" per year)	C (some cultivars will remain under 25 feet tall)
D (deciduous)	M (20-40')	M (medium)	M (12-24" per year)	
	L (taller than 40')	H (high)	H (more than 24" per year)	

**Drought tolerance** is a complicated trait, and the exact conditions a plant is exposed to are very important. Please refer to the following for more information:

[Utah State University Extension Services guide to efficient watering of trees and shrubs](#)

### Large Trees {mature height generally more than 40 feet}

- ✓ If goal of planting is shading and energy conservation select from large species list and plant on west and east exposures.
- ✓ Make sure planting location is compatible with mature size of tree both above and below and below ground.
- ✓ The larger the tree the more water it will need over its lifetime
- ✓ Please note trees will need and use more water when planted in locations of high heat and wind exposure.

Type	Size	Latin Name	Common Name	Heat	Cold	High Ph	Growth rate	Power lines OK	Drought	Comments
C	L	<i>Abies concolor</i>	White Fir	M-H	H	M	L	C	H	native; blue color
D	L	<i>Acer nigrum</i>	Black Maple	H	H	H	M			similar to sugar maple
D	L	<i>Acer pseudoplatanus</i>	Sycamore Maple	M-H	H	H	M		H	interesting bark; tolerates salt
D	L	<i>Acer x freemanii</i>	Autumn Blaze Maple	H	H	L-M	M			good fall color
D	L	<i>Aesculus glabra</i>	Ohio Buckeye	M	H	M	M		M	large fruit; leaf scorch
D	L	<i>Aesculus hippocastanum</i>	Horsechestnut	M	H	M	M		M	large fruit; leaf scorch
D	L	<i>Aesculus x camea</i>	Red Horsechestnut	M	H	M	M		M	rose-red flowers
C	L	<i>Calocedrus decurrens</i>	Incense-cedar	M-H	M	H	M			interesting bark and cones
D	L	<i>Carpinus betulus</i>	European Hornbeam	M	H	M	L	C	M	narrow form is common
C	L	<i>Cedrus atlantica</i>	Atlas Cedar	H	L	M	L	C	M	blue color
C	L	<i>Cedrus deodara</i>	Deodar Cedar	H	L	M	M	C	M	heat tolerant
D	L	<i>Celtis occidentalis</i>	Hackberry	H	H	H	H		H	gets quite large
D	L	<i>Cercidophyllum japonicum</i>	Katsuratree	M	M	M	M	C	L	nice fall color
D	L	<i>Corylus colurna</i>	Turkish Filbert	H	H	H	M		M	distinctive leaves, nuts
C	L	<i>Cupressocyparis x leylandii</i>	Leyland Cypress	H	M	H	H	C		many varieties
C	L	<i>Cupressus arizonica</i>	Arizona Cypress	H	M	H	M			very tough; bluish color
D	L	<i>Eucommia ulmoides</i>	Hardy Rubber Tree	M	H	H	M			highly adaptable; tough
D	L	<i>Fagus sylvaticus</i> vars.	European Beech	M	H	M	L	C	L	very ornamental
D	L	<i>Fraxinus americana</i> 'Autumn Purple	Autumn Purple Ash	H	H	H	M		M	purple fall leaf color
D	L	<i>Fraxinus pennsylvanica</i>	Green Ash	H	H	H	H		H	golden fall color
D	L	<i>Ginkgo biloba</i>	Ginkgo	H	H	H	M	C	H	virtually pest free
D	L	<i>Gymnocladus dioica</i>	Kentucky Coffeetree	H	H	H	M			interesting bark; nice leaf color
C	L	<i>Juniperus virginiana</i>	Eastern Redcedar	H	H	H	M	C	H	common ornamental juniper
D	L	<i>Liquidambar styraciflua</i>	Sweetgum	H	M	M	H		M	fall color; good shape; vulnerable to cold damage
D	L	<i>Liriodendron tulipifera</i>	Tuliptree	H	H	M	H		M	yellow in fall; nice flowers
C-D	L	<i>Metasequoia glyptostroboides</i>	Dawn Redwood	H	H	M-H	H		M	deciduous conifer; nice shape
D	L	<i>Morus alba</i>	White Mulberry	H	M	H	H		H	edible fruit
C	L	<i>Pinus nigra</i>	Austrian Pine	H	H	H	M		H	common; tough
C	L	<i>Pinus ponderosa</i>	Ponderosa Pine	H	H	M	M		H	native; long-needed
C	L	<i>Pinus strobiformis</i>	Southwestern White Pine	H	H	M	M			uncommon; bluish color
C	L	<i>Pinus sylvestris</i>	Scotch Pine	H	H	M	M	C	H	blue-green; orange upper bark
C	L	<i>Pinus wallichiana</i>	Himalayan Pine	H	H	M	M		M	very long needles; graceful
D	L	<i>Platanus x acerifolia</i>	London Planetree	H	H	H	H		H	can become very large
D	L	<i>Populus fremontii</i>	Fremont Cottonwood	H	H	H	H			female trees have cottony seeds; gets very large
C	L	<i>Pseudotsuga menziesii</i>	Douglas-fir	M	H	M	M		L	native; not a true fir
D	L	<i>Quercus bicolor</i>	Swamp White Oak	H	H	M	M		H	acorns; pyramidal shape when young
D	L	<i>Quercus coccinea</i>	Scarlet Oak	H	M	M	M			acorns; good fall color
D	L	<i>Quercus macrocarpa</i>	Bur Oak	H	H	H	M		H	acorns; wonderful tree
D	L	<i>Quercus muehlenbergii</i>	Chinkapin Oak	H	H	H	M		H	acorns; tough

D	L	<i>Quercus robur</i>	English Oak	H	H	M	M	M	narrow form is common
C	L	<i>Sequoiadendron giganteum</i>	Giant Sequoia	M	M	M	M		becomes very large
D	L	<i>Sophora japonica</i>	Japanese Pagodatree	H	H	H	M	M	nice flowers; somewhat canker-prone
C-D	L	<i>Taxodium distichum</i>	Baldcypress	H	M	L-M	M		deciduous conifer; nice shape
D	L	<i>Tilia tomentosa</i>	Silver Linden	M	H	H	M	M	interesting leaves
D	L	<i>Ulmus parvifolia</i>	Lacebark Elm	H	H	H	M	M	interesting bark
D	L	<i>Zelkova serrata</i>	Japanese Zelkova	H	H	M	H	H	vase shaped; red fall color

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### Medium Deciduous Trees {generally 30 to 40 feet}

- ✓ If the goal is to group trees together or to keep branches and roots in scale with the yard select from the medium species list.
- ✓ Newly planted and young trees need more frequent but less volume of water compared to established trees.
- ✓ Apply water to the root balls of newly planted trees and just beyond the dripline for other age classes
- ✓ To protect trees from injury, loss of vitality and decline water prior to heat and drought stress.
- ✓ Remember no organic process occurs in trees in the absence of water

Type	Size	Latin Name	Common Name	Heat	Cold	High Ph	Growth rate	Power lines OK	Drought	Comments
D	M	<i>Acer campestre</i>	Hedge Maple	H	H	H	M		M	dense shade
D	M	<i>Acer grandidentatum</i>	Canyon Maple	M	H	M-H	M		M	native; orange fall color
D	M	<i>Acer griseum</i>	Paperbark Maple	H	H	M	L	✓		interesting bark
D	M	<i>Carpinus caroliniana</i>	American Hornbeam	M	H	M	L	C		uncommon
D	M	<i>Celtis reticulata</i>	Netleaf Hackberry	H	H	H	M		H	native; drought tolerant
D	M	<i>Chionanthus virginicus</i>	Fringetree	H	H	M	L		L	nice flowers; uncommon
D	M	<i>Cladrastis kentuckea</i>	Yellowwood	H	H	H	M		M	nice flowers; uncommon
D	M	<i>Crataegus phaenopyrum</i>	Washington Hawthorn	H	H	H	M	✓	H	nice flowers; good fall color
D	M	<i>Fraxinus oxycarpa</i>	Raywood Ash	H	M	M	M			nice fall color
C	M	<i>Juniperis scopulorum</i>	Rocky Mt. Juniper	H	H	H	M	C	H	common ornamental juniper; blue color
D	M	<i>Koelreuteria paniculata</i>	Goldenraintree	H	H	H	M		H	great flowers; tough; compact
D	M	<i>Maclura pomifera</i>	Osage-orange	H	M	H	M		H	females have large fruits
D	M	<i>Phellodendron amurense</i>	Amur Corktree	H	H	H	M		H	tough tree; uncommon
C	M	<i>Picea glauca var. densata</i>	Blackhills Spruce	M	H	M	L	C	M	narrow crown; heat tolerant spruce
C	M	<i>Pinus flexilis</i>	Limber Pine	H	H	M	L	C	H	native
C	M	<i>Pinus heldreichii var. leucodermis</i>	Bosnian Pine	M	M	H	M			dark needles



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