

## Selecting Trees For Grand Co & SE Utah

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### Considerations

- Some of these trees are growing in Grand County and SE Utah and some are not. But all have some potential to do well here. In most cases problems could be associated with summer heat and lack of adequate water, few would relate to cold winter temperatures.
- Sizes listed likely can be achieved under normal landscape conditions. Care or lack of care can change this a lot. Mature height might take a long time to be reached with the larger trees but heights of small to medium trees will be reached quicker.
- Drought tolerant does NOT mean you don't have to water the tree especially if you want a healthy well performing tree. It means that once the tree has developed a good root system it can *tolerate* drought but not for months at a time.
- Establishment can take up to 2 years, certainly at least 1 full year.
- Tree roots: 90% of roots are in the top 2 feet of soil and they can spread out 1-4 times the width of canopy (adjust for narrow but tall trees). So think fairly shallow and wide spreading roots *if* water has been applied correctly to allow for that spread. Permanently non-irrigated parts of the landscape generally won't have tree roots in them.
- Growth rate here refers to height growth:
  - Slow = < 12" year
  - Medium = 12 to 24" a year
  - Fast = > 24" a year

### Matching Tree to the Site (is critical)

#### Site Factors:

- Soil pH, drainage, density, texture, salinity, etc.
- Water (too little, too much)
- Cold/heat
- Shade/Sun
- Space (vertical/horizontal; above ground/below)

- Structures, pavement, infrastructures

#### Tree Factors:

- Pest resistance
- Cold/heat tolerance
- Drought tolerance
- Rooting characteristics
- Growth rate
- Crown size/form
- Longevity
- Ornamental characteristics

#### Selecting Better Trees

- Moderate to slow growth – usually means a tree that will last longer
- Better cultivars
- Interesting characteristics
- Mix sizes of trees

### Small to Medium Deciduous Trees:

#### *Phellodendron amurense*, Amur Corktree

- Medium to large Tree, 30-45' H, usually as wide as tall
- Fairly pest free
- Medium growth rate
- Tolerates variety of soil types
- USDA hardiness zones 3-8
- Male tree = no fruit/mess

#### *Malus species*, Crabapple

- Many types & flower colors
- Small to medium landscape tree
- Vary widely in disease resistance, ornamental aspects, flower color and size
- Zones 3-9
- Fruit can be nuisance
- Sucker growth can be problem

#### *Chilopsis linearis*, Desertwillow

- Small shrubby tree, 6-30' H, equal width
- Often multi-stemmed
- White, burgundy or pink flowers
- Drought tolerant, deep infrequent watering
- Short lived
- Zones 7-10 (can have some winter damage of top growth but usually grows back)
- Utah native

#### *Koelreuteria paniculata*, Goldenraintree

- Medium sized tree, 20-40' H x 15-25' W
- Yellow flowers in loose bunches (panicles), flowers in summer.
- Upright rounded growth form
- Adaptable to various pH, heat, drought, etc.
- Fruit can be messy
- Zones 5(4?) – 9

- Somewhat weak wood and/or branch structure

*Celtis reticulata*, Netleaf Hackberry

- 20-40' H & slightly less width
- Found in dry foothills or valley sites
- Good for areas with limited water
- Birds love the fruit
- Slow to moderate growth
- Zones 5 (4?) – 9
- Utah native

*Crataegus crusgalli*, Cockspur Hawthorn

- Nice small tree, 20-30' H & W
- Slow to moderate growth rate
- Rounded spreading crown
- Fairly tough and drought tolerant
- pH adaptable, soil tolerant
- Attractive flowers
- Good fall color
- Thorns: Thornless var. *inermis* is used
- Zones 3-8

*Crataegus laevigata*, English Hawthorn

- Small tree up to 20' H & W
- Rounded crown
- Pink and red flowered forms
- Fruit red, birds will eat
- Slow/medium growth rate
- Thorns
- Zones 4-8
- Sucker growth sometimes occurs

*Crataegus x lavalleyi*, Lavalley Hawthorn

- 15-30' H
- Maybe not be as tough as some hawthorns (lack of cold tolerance)
- pH adaptable
- Small dense crowned tree, sometimes lop sided appearance, oval to rounded
- White blooms, red fruit, fall color
- Glossy leaves
- Zones 4-8

*Crataegus phaenopyrum*, Washington Hawthorn

- 30' H x 25' W, upright oval to spreading and rounded
- Slow to medium growth rate
- Beautiful flowers, great fall color, attractive fruit, exfoliating bark
- Tolerant of pH's, heat, drought, etc.
- Long thorns
- Zones 3-8

*Aesculus x carnea*, Red Horsechestnut

- 30-40' H
- Rounded to broad rounded form

- Red flowered, 5" to 8" clusters, attracts bees/hummingbirds
- Fruit capsule, prickly
- More drought tolerant than *A. hippocastanum*
- Nice dark green foliage
- Can be messy
- *Aesculus hippocastanum* Horsechestnut,
  - 50-75' H, 40-70' W
  - Medium growth rate
  - Whitish flower, light brown spiny fruit
  - Zones 4-7

*Carpinus caroliniana*, American Hornbeam or Musclemwood

- 20-30' H, similar width (might get larger)
- Small to medium single or multi-stem
- Slow growth rate 8 to 10' in 10 years
- Grows moist acid sites but has been seen doing well in higher pH and drier sites
- Zones 3-9

*Robina x ambigua*, Purple Robe Locust (or Idaho flowering locust)

- 30-40' H, 20-30' W
- Medium to fast growth rate
- Rose pink flowers
- Concern with branch angle, branches can split off tree; can get borers
- Very ornamental while it lasts
- Zones 3-8

*Magnolia x soulangiana*, Saucer Magnolia

- 20-30' H, width varies
- Medium growth rate
- Flowers, white to pink to purple
  - flowers can be damaged by late frost
- Not very drought tolerant
- Zones 4-9

*Magnolia stellata*, Star Magnolia

- 15-20' H, 10-15' W
- Dense oval to rounded large shrub or small tree
- Slow growth rate
- White fragrant flowers, opens early
- Many good cultivars
- Zones 4-8 (9)

*Acer grandidentatum*, Canyon or Bigtooth Maple

- Size small to medium
- Shrubby to tree like
- Withstands high pH soil better than many introduced maples
- Some drought tolerance
- Fall color very good
- Zones 4 (3) – 7

- Utah native

*Acer campestre*, Hedge Maple

- 25 to 35' H, similar width
- Rounded and dense
- Adaptable, tolerant of high pH soils and dry soils
- Has been used as a hedge in Europe
- Zones 4-8

*Acer truncatum*, Purpleblow or Shantung Maple

- 20 – 25' H, similar width
- Small round headed tree
- Slow growth rate
- Drought tolerant
- Nice spring, summer and fall color
- Zones 4 - 8

*Acer tataricum*, Tatarian Maple

- 15-20' H, similar width
- Large multi-stemmed shrub or small rounded tree
- Slow to medium growth
- Tolerant of adverse conditions including drought and high soil pH
- Small specimen tree
- Zones 3-8

*Acer buergeranum*, Trident Maple

- 20-30' H, similar width
- Oval rounded to rounded small tree
- Slow to medium growth rate
- Good color spring, summer, fall
- Drought tolerant
- Zones 5-9

*Pyrus calleryana*, Callery Pear

- 30-50' H x 20-35' W
- Fast growth rate
- White flowers
- Moderately pyramidal or conical
- Some weak branch structure
  - Try varieties such as Aristocrat, Chanticleer, Redspire
- Zones 5-8 (9)

*Parrotia persica*, Persian Ironwood

- 20-40' H x 15-30' W
- Slow to medium growth rate
- Exfoliating bark, yellow to orange fall leaf color
- Well drained, loamy, slightly acid soil but suggested will tolerate alkaline soils, tolerant to various conditions once established
- Zones (4)5-8

*Pistacia chinensis*, Chinese Pistache

- 30-35' H x 25-35' W

- Oval rounded to rounded
- Medium to fast growth
- Dark green leaves summer, orange to orange red fall
- Very adaptable, heat and drought tolerant
- Zones 4-9
- Female trees can be messy

*Prunus cerasifera*, Purpleleaf Plum

- 15 – 30' H , 15 – 25' W
- Fast growth rate
- Adaptable but does get iron chlorosis in high pH soils
- Weak branch attachments, ok flowers
- Zones (4) 5 - 8

*Cercis Canadensis*, Eastern Redbud

- 20-30' H x 25-35' W
- Medium but faster with increased care
- Flowers, reddish purple in bud to rosy pink  
Cultivars available with different coloration, both flower and leaf
- Does well many soil types, including higher pH, full sun or light shade (easier to establish SE Utah with some shade)
- Zones 3-9
  - (*Cercis occidentalis*, California redbud
    - zones 7-9

**Small To Medium Evergreen Trees**

*Juniperus scopulorum*, Rocky Mountain Juniper

- 30-40' H x 3-15' W
- Slow growth rate
- Drought resistant, pH tolerant
- Often used as windbreaks, visual screens
- Many cultivars available
- Low water needs once established
- Zones 3-7
- Utah native

*Juniperus osteosperma*, Utah Juniper

- Up to 15' H
- Native to Utah at middle elevations
- Very cold, drought and heat resistant and tolerant of wide range of soil conditions
- Can be shrubby but also upright; usually smaller (up to 15') than Rocky Mtn. Juniper
- Utah native

*Picea pungens*, Blue Spruce

- 30-60' H x 10-20' W
- Slow to medium
- Utah's official state tree
- Likes moisture and good soil, may not do well with extreme heat or hot dry winds but somewhat adaptable (hit and miss in Moab)

- Zones 2-7
- Utah native

*Pinus edulis*, Pinyon

- 15-20' H
- Native to southern Utah, mid elevations.
- Grows on dry sites, don't over water
- Zones 4-8
- Utah native

*Pinus flexilis*, Limber Pine

- 30-50' H x 15-35' W
- Long lived, slow growing
- Dry harsh sites (native to higher elevations)
- Nice dark green color, tough don't overwater
- Zones 4-7
- Various cultivars (Vanderwolf's Pyramid)
- Utah native

*Pinus longaeva (aristata)*, Bristlecone Pine

- 8-20' H, irregular spread
- Native in mountainous areas including Utah
- Slow growing (extremely), long lived
- Dry tough sites (poor, dry soils, pH adaptable)
- Nice green color, interesting often contorted shape
- Low water needs once established
- Zones 5-7

*Pinus sylvestris*, Scotch Pine

- 30-60' H x 30-40' W
- Medium growth rate when young, slowing as gets older
- Early on pyramidal, as ages wide spreading (usually losing lower branches)
- Might have problems in highest pH soils
- Don't overwater
- Zones 2-8

*Thuja (Platyclusus) orientalis*, Oriental Arborvitae

- 18-25' H x 10-15' W
- Slow to medium growth rate
- Shrubby tree
- Hedges, specimens
- Zones 5-11

**Medium to Large Deciduous Trees:**

*Fraxinus pennsylvanica*, Green Ash

- 50-60' H x 25-30' W
- Drought tolerant, tolerant of fairly high pH, salt, wind
- Fast growing – 2-3' year
- Tough durable tree
- Seedless cultivars available
- Zones 4-7 (9)

- Insect/disease prone when stressed

*Fraxinus velutina*, Velvet or Modesto Ash

- 30-50' H
- Native to canyons of southwestern Utah, found along intermittent streams
- Tolerant of drought, heat and high soil pH
- Zones 7 (6) to 10

*Fraxinus americana*, White Ash

- Large tree, 50 – 80' H, similar width
- Native to moist sites in eastern US, tolerates drier, pH adaptable,
- Superior ornamental to green ash
- Fall color
- Zones 3-9
- Less susceptible to borers
- Has been sold here, often as 'Autumn Purple' cultivar

*Tilia americana*, American Basswood or American Linden

- Large shade tree- 60-80 H', spread ½ to 2/3
- Medium growth rate (may grow 2 to 3' yr)
- Will grow in heavier soils
- Fragrant Flowers
- Cultivar 'Redmond'
- Zones 3 to 8 (9)
- Possibly gets leaf scorch

*Catalpa speciosa*, Northern or Western Catalpa

- Large narrow crowned tree – 40-70' H x 20-40' W
- Beautiful white bell shaped flowers and interesting but messy long bean like capsule fruit (distinctive crown form)
- Wood is somewhat weak and brittle
- Very tough and tolerant of hot, dry sites and poor drainage and high pH soils.
- Zones 4-9

*Gymnocladus dioicus*, Kentucky Coffeetree

- Fairly large tree, up to 70' x 50' H
- Early growth gangly, becoming oval to upright rounded
- Rapid growth early, slowing as it gets older
- Well adapted to variety of climates and soils
- Dark green foliage and bark are attractive
- Zones 3-8
- Use fruitless varieties if possible

*Ulmus parvifolia*, Lacebark or Chinese Elm

- This is not the inferior "Siberian Elm"
- Vase shape, 50' H, similar width
- Medium to fast growth rate
- Nice crown form, interesting bark, attractive foliage

- Adaptable to wide variety of sites, pH, heat, drought, etc
- OK fall color
- Zones 4-9

*Corylus colurna*, Turkish Filbert or Turkish Hazel

- Medium sized tree, 40-50' H x 20-25' W
- Pyramidal crown
- Medium growth rate
- Edible nut
- Tolerates wide range of conditions including high soil pH, moderate drought and fairly cold temperatures.
- Edible nut
- Zones 4 – 8

*Ginkgo biloba*, Ginkgo or Maidenhair Tree

- Large, 80' x 60' H
- Strong, upright growth
- Tolerates urban environments including smoke, compacted soil and salt
- Does well in soils with high pH and tolerates heat, drought, etc
- Only plant males (female bares stinky fruit)
- Good fall color (golden)
- Zones 3-9

*Celtis occidentalis*, Hackberry or Common

Hackberry

- Large, 40-60' H with similar width
- Medium to fast growth rate
- Nice crown form, unusual bark
- Adapted to moderate drought, heat, wind and high soil pH
- Dark purple fleshy fruit, edible, sweet date taste (watch hard seed), birds like fruit
- Good large landscape tree
- Zones 2-9

*Gleditsia triacanthos*, Honeylocust

- Good “large” landscape tree due to toughness and adaptability, 50-60' H, 35-50' W
- Very hardy and drought tolerant
- Tolerant of salt and high pH
- Medium to fast growth rate
- Loose and open
- Not trouble free, some canker issues and insects
- Use thornless and fruitless cultivars
- Insects: Plant bugs/leafhoppers/pod gall midge
- Zones 3-9

*Acer nigrum*, Black Maple

- 60-75' H, width varies
- Has dark green mostly 3 lobed leaves, “drooping lateral leaf lobes”

- Yellow fall color
- Possibly greater heat and drought tolerance than sugar maple
- Fast growth rate
- Might be difficult to obtain
- Zones 4-8

*Morus alba*, White Mulberry

- 30-50' H similar width
- Dense, round topped tree
- Fast growth rate
- Adaptable, withstands drought, high pH
- Don't plant near concrete
- Fruitless types
- Zones 5-9
- *Morus rubra* or Red Mulberry
  - 40-70' H, 40-60' W, taller, more open and more irregular than *M. alba*.

*Quercus macrocarpa*, Bur Oak

- 70-80' H similar or less width
- Slow growth rate
- Adaptable to various soils and drought
- Zones 2-8

*Quercus gambelii*, Gambel, Scrub or Rocky Mtn White Oak

- Can reach 60' H
- Grows in clumps
  - Sucker growth can be problem
- Drought tolerant
- Good fall color
- Zones 4-8
- Utah native

*Quercus muehlenbergii*, Chinkapin Oak

- 40-50' H with width usually greater
- Open rounded crown mature
- Medium growth rate youth, slower as gets older
- OK on higher pH soils
- Hard to find
- Zones (4) 5-7

*Quercus robur*, English Oak

- 40-60', similar width
- Slow to medium growth rate
- Often narrow crowned
- Zones 4-8

*Quercus cerris*, Turkey Oak

- 40-60' H, similar width
- Tolerates drought, high soil pH
- Hard to find
- Interesting acorn and leaf
- Zones 5-7

*Quercus alba*, White Oak

- 50-80'H similar width
- Pyramidal young, up-right to round older
- Slow to medium growth rate
- Tolerates moderately high pH
- Zones 3-9

*Maclura pomifera*, Osage-orange

- 50-80' H similar width
- Pyramidal young, up-right to round older
- Slow to medium growth rate
- Tolerates moderately high pH
- Zones 3-9

*Sophora japonica*, Japanese Pagodatree or Scholar-tree

- 50-75' H, similar width
- Medium to fast growth rate
- Showy flowers, mildly fragrant
- Once established withstands heat and drought well
- Possible canker problem (limit stress)
- Zones 4-7 (8)

*Zelkova serrata*, Japanese Zelkova

- 50-80' H, width less than height
- Medium growth rate (maybe fast as youth)
- pH adaptable, once established wind and drought tolerant
- Leaves dark green summer, can have good fall color, interesting bark
- Zones 5-8
- Can have *included* bark

**Medium to Large Evergreen Trees:**

*Cupressus arizonica*, Arizona Cypress

- 40-50' H x 25-30' W
- Medium growth rate
- Pyramidal
- Nice looking bark
- Various cultivars
- Zones 7-9 (has been damaged/killed by harsh winters)

*Juniperus chinensis*, Chinese Juniper

- Trees 50-50'H x 15-20' W
- Slow to medium growth rate
- Ground cover, shrub, hedge, specimen, tree depending on cultivar
- Drought, cold and heat tolerant, tolerant of high pH soils.
- Dozens of cultivars with different shapes and sizes (shrubs to tree forms)
- Zones 3-9 (depending on cultivar)

*Juniperus virginiana*, Eastern Red Cedar

- 40-50'H x 8-20' W
- Not a true cedar

- Hardy and long lived
- Medium growth rate
- Tolerant of adverse conditions, poor soil, high pH
- Good windbreak or hedge, many good cultivars available
- Zones 3-9

*Metasequoia glyptostroboides*, Dawn Redwood

- 70-100' H x 25' W
- Fast growth rate (up to 50' 15-20 yrs)
- Deciduous conifer (not evergreen)
- Strong pyramid/conical shaped crown
- Not very tolerant of high pH soils
- Not as tolerant of dry then wet conditions needs a more even moisture
- Zones 4-8

*Pinus densiflora*, Japanese Red Pine

- 40-60' H, similar width
- Slow to medium growth rate
- Needs average water/soil
- Attractive bark
- Irregular and interesting crown and trunk form often crooked or leaning
- Zones 3-7

*Pinus nigra*, Austrian Pine

- 50-60' H x 20-40' W
- Medium growth rate
- Very tolerant of variety of soil conditions, resists heat and drought (but needs moisture)
- Similar in size and habit to ponderosa pine
- Tough tree
- Zones 4-7

*Pinus ponderosa*, Ponderosa Pine

- 60-100' H x 25-30' W
- Medium growth rate
- Large long needled pine
- Drought resistant
- Native to higher altitude mountainous areas, resists fires.
- Zones 3-7

*Pinus strobiformis*, Southwestern White Pine

- < 100'H in cultivation
- Pyramidal/conical mostly
- Possibly variety of limber pine.
- Nice blue-green needle color, good Christmas tree.
- Zones 5-7

*Thuja occidentalis*, White Cedar, Northern or Eastern Arborvitae

- 40-60' H x 10-15' W
- Slow to medium growth rate

- Different forms from shrubby to large pyramidal to weeping
- Hedge, visual screen, windbreak.
- Doesn't like extreme heat and dry conditions but once established does ok
- Zones 3-7

**References:**

Utah Tree Browser Website – [www.treebrowser.org](http://www.treebrowser.org)

Trees of Utah and the Intermountain West. 1998.  
M.R. Kuhns, USU Press.

Manual of Woody Landscape Plants. 1975, M.A Dirr,  
Stipes Publishing LLC.

**Trees not recommended due to disease, insect or other problems:**

Hybrid poplar/cottonless cottonwood

(due to disease-slime flux issues, insects, iron chlorosis problems, etc.)

Willows (such as Globe, Weeping, etc.)

(due to disease-slime flux issues, insects, iron chlorosis problems, etc)