Tree Selection Guide

LEWISTON PARKS AND RECREATION
URBAN FORESTRY

How to Use This Guide

This guide is divided into sections determined by the width, height and spacing requirements that trees will need at maturity. Broadleaf trees (trees that normally shed their leaves annually) have been arranged into classes, Small, Medium & Large for easy reference. Conifers (mostly evergreen trees), are listed next in alphabetical order.

Small   Are trees, which normally do not reach a large height or trunk diameter. They can be planted beneath power lines and in smaller planting areas. Typical spacing 20-30 feet. (Class I)

Medium   Are usually considered medium sized trees and predominately planted for their shade and general landscape uses. Typical spacing 30-40 feet. (Class II)

Large   Many are long-lived and attain large height and trunk diameter. When selecting a tree from this class, be sure you have ample room to accommodate it at maturity. Typical spacing 40-60 feet. (Class III)

Conifers Provide year round greenery, screening and serve as excellent wildlife sanctuaries. They generally should not be pruned and therefore need large growing areas away from buildings, sidewalks and driveways. Spacing varies with species.

Specific heights, crown spreads and other tree characteristics are found under the description of each tree. Trees planted in the ROW should be at least 1 ½" caliper at time of planting.

Plan Before You Plant

The importance of matching the tree and its growth requirements to the planting site cannot be over emphasized. The best planting procedures known will not save a tree that is poorly suited to the planting site. The tree must be able to tolerate factors such as unfavorable soil conditions, inadequate or excessive water levels and space or shade limitations. Selecting a tree that meets the site conditions is the single most important factor in guaranteeing its success. Begin by making a sketch of your property showing existing vegetation, utilities, sidewalks and driveways. When planting more than one tree or groups of trees, be conscious of the different planting space required for each species. Be sure to group those needing similar growing conditions together (i.e. water, light and soil types). In Idaho you must call Digline at 1-800-342-1585 before digging.

To select the planting site and the tree that best fits your needs, carefully consider:

A. Landscaping purpose – To provide shade, color, a screen from the wind or to enhance wildlife habitat.

B. Planting site – Are overhead or underground utilities present? Make sure you give your tree adequate room to grow. Try to envision it 10-50 years into the future. How close it the tree to structures and other trees near the planting area.

C. Soils – In urban areas can be highly variable. Too much or too little drainage often causes trees to decline and die. Check with your county extension office for soil testing information.

D. Maintenance – All trees need regular watering, routine pruning and periodic inspection for pests and disease. Planning now can save time and money later.
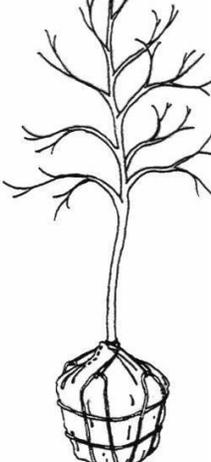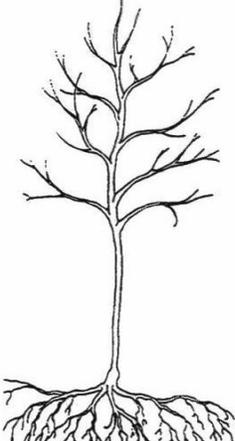
Tree Forms

The tree forms pictured here are examples of tree shapes at maturity. It should give you a good idea of how the tree will look and help you plan its inclusion in your landscape. These forms are referred to under the tree characteristics in this guide.

Tree Planting Instructions

The three most common types of planting stock found at local nurseries are in containers, bare root, or balled and burlapped (B&B). Planting procedures will vary depending on the type of stock selected. Each has advantages and disadvantages, but a sturdy tree will result by carefully following the procedures outlined below.

1. Dig hole 2-3 times as wide as the root ball and the same depth as the tree was planted in the nursery. Make sure the sides of the hole are rough and uneven. This helps the roots become established in the native soil. Continue with the steps below, depending on the type of stock you are planting.

Type:	Planting Procedure:
Container-grown	Gently remove container and inspect the root ball for circling roots. If only a few are found, gently separate and spread them outward. Eliminate masses of circling roots by cutting 2-4 vertical slices on the root ball sides to a depth of one-half inch and cut a shallow "X" on the bottom of the root ball. Cutting circling roots in this way allows growth of new roots into the surrounding native soil. Place the root ball in the planting hole, making sure that the top is level with or slightly higher than the surrounding ground.
Balled and Burlapped	Carefully set the tree into the planting hole so the top of the root ball is level with or slightly higher than the surrounding ground. If the tree is in a wire basket, completely remove it, if possible, or remove the upper one-half after the tree is in its final planting position. Take care not to damage the roots or disturb the integrity of the root ball. Adjust the position using pressure on the root ball; don't move it by twisting the trunk. Straighten the tree and stabilize it by adding soil around the bottom portion of the root ball. Cut and remove all twine, and cut the burlap half way down the root ball.

Be sure to keep the roots moist at all times! Prune away any damaged or broken roots. Place the tree in the hole at the same depth it grew in the nursery. Do not allow roots to curl up or around in the hole. Add soil until the tree can stand by itself. Hold it straight while the hole is being filled. Gently push soil under and between roots with your hands to remove large air pockets. If the tree settles in the hole, gently pull it back to the proper depth.

Bare Root

Tree Planting Instructions Continued

2.   Stand back and inspect the tree from several sides to make sure it's straight. If not, move the tree in the hole until it stands straight. Backfill with soul around the roots until it is half full. Water sparingly to settle the soul and remove air pockets. Lightly tamp the soil in with the shovel handle to compress the soil around the root ball, taking care not to damage the roots. Continue adding soil until the hole is filled. **<u>Do Not</u>** cover the top of the root ball with soil.

3.   With the remaining soil, build a basin around the edge of the filled hole. Fill the basin with wate several times and allow it to soak in to the root ball between each filling. Add soil where excessive settling has occurred.

4.   Fill the basin with 2-3" of wood chips. Do not place chips directly against the trunk, as this may promote stem rot.

5.   Unless you live in a windy area, it is not necessary to stake the tree. If you do stake, use flexible ties and remove them after one year. Stake if the root ball is fractured or the trunk is not stable.

Stake Placement
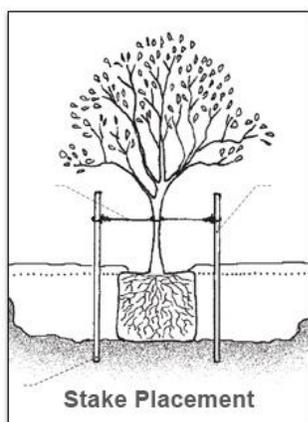
Important note: Wrapping the stem of the tree with a white material is often necessary to protect the stem from sunscald, deer antler rubbing, and damage from lawnmowers.

Maintaining Healthy Trees

Once a tree is planted there are several things that must be done to help ensure its survival. Most of the threats to the health and life of young trees can be avoided or reduced with a few simple precautions. Please read the following post-planting care tips carefully.

Watering

Watering the tree regularly during the first year is critical to its establishment. Apply about 1 ½" per week at one time rather than watering daily. Place a shallow pie pan under the tree canopy and water the area until 1 ½" accumulates in the pan. Depending on your sprinkler system, it may take ½ hour to 3-4 hours. Begin watering in the spring when the soils start drying out and continue until fall. Deduct rainfall received during the week from the 1 ½" total. Apply water more often during periods of drought and above normal temperatures.

Mulching

Mulching is a must! Mulch with wood chips top help retain soil moisture and reduce weeds. It also protects the tree from lawn mowers and weed ships. Apply mulch with 2"-3" of material at a 6' diameter. Keep mulch away from the tree trunk a few inches to avoid trunk rot. As mulch decomposes, it enriches the soil and provides organic matter and beneficial microorganisms.

Fertilizing

Fertilizers are natural or synthetically produced elements applied to the soil or foliage of the plants to supply nutrients necessary for normal or accelerated growth. With the exception of nitrogen, fertilizing with other nutrients is usually not required unless a known deficiency exists. As long as your trees have normal leaf size and color and appear to be growing well, the nutrients in the soil are probably adequate.

If a deficiency is suspected, a soil analysis should be done to determine what nutrient or mineral is deficient. Testing can usually be performed by an agricultural soil laboratory or by your local county extension office. After testing, a report is prepared for you identifying what nutrients need to be applied since over application of certain elements over time can be harmful to your trees.

Over fertilization can contribute to ground water contamination or pollution of adjacent bodies of water. If nitrogen is applied, slow release formulas are recommended as they will limit the chances of root 'burning', which can be causedby some forms of quick release, high concentrate, nitrogen fertilizers. Natural organic forms of nitrogen are your best choices for fertilizing.

Pruning

Pruning is the most common tree maintenance procedure. Pruning to improve structure or enhance vigor is associated with mature or aging trees. When planting young trees, prune to remove the dead, broken, or crossing branches. Cut the branches to just outside the branch collar. Avoid flush cuts or stubs. Do not apply wound dressings to the cut area after pruning. It is not necessary and may impede the tree's natural healing process. For more information, please call (208) 791-9602

Pests

Some of the more common forms of pests include insects, mites, bacteria, fungi and viruses. There are many organisms in the landscape that are considered pests because of the amount of damage they cause the host plant or because they may be present in such large numbers that they become undesirable. However, some of these organisms **do not** harm plants but are truly beneficial to the host plant and are a valuable component of the ecosystem.

Many pest problems occur as a result of improper watering, poor plant stock, or an inferior planting site. Trees that are poorly adapted to a particular site are usually the most affected by pests. Choosing the appropriate tree and plating it in an environment capable of sustaining good growth will significantly reduce many pest problems.

In selecting the trees for the illustrated section of this guide, we have chosen species that have adapted well to our local environment. Although we have listed certain pests associated with these trees, with the proper attention to correct planting procedures, growing conditions and maintenance, you will promote a tree's best protection against pests. . . **Good Health!**

Weeds and Herbicides

Keep the area around your tree free of weeds and other competing plants. Use wood chip mulch to suppress the weeds or remove them by hand when possible. Avoid the use of herbicides near the tree as certain formulations may seriously injure or kill the tree. If you do decide to use herbicides, avoid getting any on the leaves, branches, and trunk or near the root area of any plant you wish to keep. Beware of fertilizers containing weed killers. These types fo 'wed and feed' fertilizers Should not be used over areas where tree roots are growing as they can seriously injure or even kill trees. Remember that tree roots extend well beyond the perimeter of the outermost branches.

Hazard Tree Recognition

A hazard tree is defined as any defective tree, or tree part, that poses a high risk upon its failure or fracture to cause injury to people or damage to property. A hazard tree has one or more defects, which decreases its structural integrity and gives it an increased potential for failure. Defects that are visible or detectible include cracks, decayed wood, weak branch attachment, cankers, poor tree architecture, root problems and dead trees or branches.

A defective tree is not considered hazardous unless there is a nearby target that it could hit. A target could be a person, vehicle, tent, building, picnic table, campfire ring, recreation equipment, and so on. The term target area is used to describe an area where people or their equipment are likely to stop and congregate. An individual campsite is an example of a target area. By definition, **a hazard tree = a defective tree plus a target.**

An inspection is a systematic method of examining an rating trees. The purpose of a hazard tree inspection is to detect defective trees in target areas assess the severity of the defects and recommend corrective actions before failure occurs. Inspection priorities are based upon human mobility within the target area, the duration of site occupancy, and the level of site maintenance. Consult a licensed arborist for more information on hazard tree inspection. Remember that safety is paramount in both your yard and your community forest.

Tree Selection Guide - Work Sheet

Common	Botancial	Class
Maple, Trident	*Acer buergerianum*	I
Maple, Hedge	*Acer campestre*	I
Maple, Amur	*Acer ginnala*	I
Maple, Paperbark	*Acer griseum*	I
Maple, Canyon/ Bigtooth	*Acer grandidentaum*	I
Maple, Greencolum	*Acer nigrum 'Greencolum'*	II
Maple, Pacific Sunset	*Acer x Pacific Sunset*	II
Maple, Norway	*Acer platanoides*	II
Maple, Norway Cloumnar	*Acer platanoides ' Columnar*	I
Maple, Norway Crimson King	*Acer platanoides 'Crimson King'*	I
Maple, Globe Norway	*Acer platanoides 'Globsum'*	I
Maple, Sycamore	*Acer psuedoplatanus*	I
Maple, Sugar	*Acer saccharum*	II
Maple, Rocky Mountain Glow	*Acer saccharaum grandidentatum*	I
Maple, Tartarian	*Acer tartaricum*	II
Horsechestnut, Red	*Aesculus x carnea 'Briotti'*	II
Horsechestnut, Common	*Aesculus hippocastanum*	II
Buckeye, Red	*Aesculus pavia*	I
Alder, Black	*Aluns glutinosa*	II
Alder, Mountain	*Alnus tenuifolia*	II
Birch, European White	*Betula pendula*	II
Birch, River	*Betula nigra*	II
Birch, Whitebarked Himalayan	*Betula utilis 'Jacquemonti'*	II
Hornbeam, European	*Carpinus betulus*	II
Hornbeam, Columnar European	*Carpinus betulus 'Frans Fontaine'*	I
Hornbeam, American	*Carpinus caroliniana*	II
Catalpa, Umbrella	*Catalpa bungeii 'Nana'*	II
Catalpa, Purple	*Catalpa x erybescebs*	III
Catalpa, Northern	*Catalpa speciosa*	III
Hackberry, Common	*Celtis occidentalis*	III
Katsura Tree	*Cercidiphyllum japonicum*	II
Eastern Redbud	*Cercis canadensis*	I
Yellowwood, American	*Cladrastis kentukea*	II
Dogwood, Korean	*Cornus coreana*	I
Dogwood	*Cornus florida*	I
Dogwood, Kousa	*Cornus kousa*	I
Filbert, Turkish	*Corylus colurna*	II
Hawthorne, Thornless Cocksupur	*Crataegus crus-galli 'Inermis'*	II
Hawthorne, Black	*Crateagus douglasii*	I
Hawthorne, English	*Crataegus Laevigata*	I
Hawthorne, Lavalle	*Crataegus lavalii*	II
Hawthorne, Washington	*Crataegus Washington*	I
Persimmon, Common	*Diospyros virginiana*	II

Common Name	Scientific Name	Class	Notes
Hardy Rubber Tree	*Eucommia ulmoides*	II	
Winterberry Euonymus	*Euonymus bungeans*	I	
Korean Evodia	*Tetradium daniellii*	I	
Beech, American	*Fragus grandifolia*	III	
European Beech	*Fagus sylvatica*	III	
Ash, White	*Fraxinus americana*	II	
Ash, Narrowleaf	*Fraxinus angustifolia*	II	
Ash, European	*Fraxinus excelsior*	III	
Ash, Desert Ash	*Fraxinus oxycarpa*	I	
Ash, Raywood	*Fraxinus oxycarpa 'Raywood'*	II	
Ash, Green	*Fraxinus pennsylvanica*	II	
Ash, Leprachaun	*Fraxinus pennsylvanica* 'Johnson'	I	
Ash, Blue	*Fraxinus quadrangulata*	II	
Ginkgo	*Ginkgo biloba*	II	
Ginkgo, Princeton Sentry	*Ginkgo biloba* 'Princeton Sentry'	I	
Honeylocust, Thornless.	*Gleditsia triacanthos var. inermis*	II	
Coffeetree, Kentucky	*Gymnocladus dioicus*	III	
Golden Rain Tree	*Koelreuteria paniculata*	I	
Sweetgum, American	*Linguidambar styraciflua*	II	
Sweetgum, Cherokee	*Liquidambar styraciflua 'Ward PP 10027'*	II	
Sweetgum, Emerald Sentinel	*Liquidambar styraciflua 'Clydesform'*	I	
Tuliptree	*Liriodendron tulipifera*	III	
Amur Maackia	*Maackia amurensis*	I	
Magnolia, Cucumbertree	*Magnolia acuminata*	II	
Magnolia, Galaxy	*Magnolia x 'Galaxy'*	I	
Magnolia, Saucer	*Magnolia x soulangiana*	I	
Magnolia, Royal Star	*Magnolia sellata* 'Royal Star'	I	
Prarie Rose Crabapple	*Malus spp. -*	I	Dbl Pink little or no fruit
Crabapple Spring Snow - White	*Malus x* 'Spring Snow' -	I	Fruitless
Black Tupelo	*Nyssa sylvatica*	II	
American Hophornbeam, Ironwood	*Ostrya virginiana*	II	
Persian Parrotia	*Parrotia persica*	I	
Corktree, Amur	*Phellodendron amurense*	II	
Corktree	*Phellodendron lavallei*	III	
Spruce, Norway	*Picea aibes*	I	
Chinese Pistacia	*Pistacia chinensis*	III	
London Plane Tree	*Plantanus aceifolia*	III	
Yarwood Planetree	*Platanus x acerifolia*'Yarwood'	III	
Amur Chokecherry	*Prunus maackii*	II	
Eruopean Bird Cherry	*Prunus padus*	I	
Kwanzan Flowering Cherry	Prunus serrulata 'Kwanzan'	II	
Cherry, Royal Burgandy	Prunus serulata 'Royal Burgandy'	I	
Cherry, Sargent	*Prunus sargentii*	I	
Weeping Flowering Cherry	*Prunus spp.*	I	
Flowering Plum	*Prunus spp.*	I	
Chokecherry, Canada Red	*Prunus virginiana*	I	
Plum, Flowering (Newport)	*Prunus cerasifera*	I	

Plum, Blireiana	*Prunus x blireiana*	I
Cherry, Spire	*Prunus x hilleri* 'Spire'	II
Pear,Callery	*Pyrus calleryana*	II
Pear, Chanticleer	*Pyrus calleryana* ' Chanticleer'	II
Oak, Sawtooth	*Quercus acutissima*	II
Oak, White	*Quercus alba*	III
Oak, Crimson Spire	*Quercus alba x Quercus robur* 'Crimschmidt'	III
Oak, Swamp White	*Quercus bicolor*	III
Oak, Scarlet	*Quercus coccinea*	III
Oak, Forest Green	*Quercus frainetto*	III
Oak, Shingle	*Quercus imbricaria*	III
Oak, Bur	*Quercus macrocarpa*	III
Oak, Chinkapin	*Quercus muehlenbergii*	II
Oak, English	*Quercus robur*	III
Oak, Red	*Quercus rubra*	III
Oak, Shumard	*Quercus shumardii*	III
Sassafras	*Sassafras albidum*	II
Pagodatree, Japanese	*Sophora japonica*	III
Stewartia, Japanese	*Stewartia pseudocamelhia*	I
Lilac, Japanese Tree	*Syringa reticulata*	I
Baldcypress, Common	*Taxidium, distichum*	III
Linden, American	*Tilia americana*	II
Linden, Little Leaf	*Tilia cordata*	II
Linden, Corinthian	*Tilia cordata 'Corzam'*	I
Linden, Summer Sprite	*Tilia cordata 'Halka'*	I
Linden, Silver	*Tilia Tomentosa*	II
Elm, Liberty	*Ulmus americana* 'Liberty'	III
Elm, Frontier	*Ulmus* 'Frontier'	III
Elm, Camperdown	*Ulmus glabra camperdownii*	II
Elm, Allee	*Ulmus parvifolia* 'Elmer II'	III
Elm, Chinese	*Ulmus parvifolia* '	III
Elm, Siberian	*Ulmus pumila*	III
Zelkova,	*Zelkova serrata*	II
Zelkova, Green Vase	*Zelkova serrata* 'Green Vase'	III
Zelkova, Wireless	*Zelkova serrata 'Schmidtlow'*	II
Zelkova, Village Green	*Zelkova serrata* ' Village Green'	II

Prohibited in ROW

		Wide lower branching block ROW
Fruiting Apples	*Malus*	Fruit on walks
Fruiting Cherries	*Prunus*	Fruit on walks
Fruiting Pears	*Pyrus*	Fruit on walks
Boxelder	*Acer negundo*	Insects, brittle
Silver Maple	*Acer saccharinum*	Brittle
Tree of Heaven	*Ailanthus altissima*	Invasive
Paper Birch	*Betula papyrifera*	Birch Borer, aphids
European Birch	*Betula pendula*	Birch Borer, aphids

Russian Olive	*Elaeagnus angustifolia*	Invasive
Mulberry	*Morus alba*	Messy fruit, invasive poor growth habit
Poplar	*Populus species*	short lived, brittle
Quaking Aspen	*Populus tremuloides*	short lived, brittle
Pin Oak	*Quercus paulustreis*	Often chloratic in our soils
Sumac	*Rhus*	Invasive
Locust, Idaho Pink	*Robinia x ambigua* ' Idahoensis'	Locust Borer
Willow	*Salix specis*	Locust Borer
Mountain Ash	*Sorbus*	short lived, brittle

With Reservations

Elm	*Ulmus* species	Consider Dutch Elm resistance, brittle
Ash	*Fraxinus* species	Lilac Ash borer current problem. Emerald ash borer probable threat

Highly Desirable Trees For Street Planting:

Acer grandidentatum 'Schmidt'
Rocky Mountain Glow® Maple

Zone: 4   **Height:** 25'   **Spread:** 15'

Pistacia chinensis 'Pair's Choice'
Western Son® Pistache

Zone: 6   **Height:** 30'   **Spread:** 30'

Zelkova serrata 'Halka'
Halka Zelkova

Zone: 5   **Height:** 45'   **Spread:** 35'

Ginkgo biloba 'The President'
Presidential Gold® Ginkgo

Zone: 4   **Height:** 50'   **Spread:** 40'

Acer saccharum 'Hiawatha 1'
Oregon Trail® Maple

Zone: 5   **Height:** 45'   **Spread:** 40'

Koelreuteria paniculata 'JFS-Sunleaf'
Summerburst® Goldenrain Tree

Zone: 5   **Height:** 30'   **Spread:** 30'

Phellodendron lavallei 'Longenecker'
Eye Stopper™ Cork Tree

Zone: 4   **Height:** 40'   **Spread:** 35'

Acer campestre 'Panacek'
Metro Gold® Maple

Zone: 5b   **Height:** 35'   **Spread:** 20'

Quercus macrocarpa 'JFS-KW3' PP 22815
Urban Pinnacle® Oak

Zone: 3   **Height:** 55'   **Spread:** 25'

Acer truncatum x Acer plat. 'JFS-KW249'
Ruby Sunset™ Maple

Zone: 4b   **Height:** 25'   **Spread:** 20'

Shape: Broadly oval to rounded
Foliage: Dark green, glossy
Fall Color: Deep red

Elegant foliage stays fresh and glossy throughout the growing season. Hybrid origin adds cold hardiness and adaptablility to this selection that most resembles *A. truncatum* in appearance, growth habit and size. A great choice for smaller sites requiring a more compact tree.