TREES PROVIDE BEAUTY
Trees provide a long list of benefits. They provide inviting and cool areas for recreation and relaxation in playgrounds and parks. Throughout the year, they create wonderful colors and interesting forms that are always changing. Trees screen unattractive views and soften the harsh outline of masonry, metal, asphalt, steel and glass.

TREES PROVIDE SHADE
People walk and jog more on shaded streets, which encourages interaction with neighbors and improves the sense of community. Trees cool the city by shading our homes and streets, breaking up urban “heat islands” and releasing water vapor into the air through their leaves. And they absorb and block sound, reducing noise pollution by as much as 40 percent.

TREES CLEAN THE AIR
Trees absorb pollutants such as nitrogen oxide, ammonia, sulfur dioxide and ozone. And they filter particulates out of the air by trapping them on their leaves and bark.

TREES CONSERVE ENERGY
Planting trees around you home can provide shade which cools the house in summer. Likewise, some trees like conifers can help shelter your home from the wind. Reducing the energy demand for our houses can reduce carbon dioxide and other pollution emissions from power plants.

TREES PROVIDE FOOD
A wide variety of fruit trees can grow in Livingston — apple trees, cherry trees, and pear trees. One apple tree can produce 15-20 bushels of fruit per year. In addition, trees provide food for birds and wildlife.

TREES HAVE ECONOMIC VALUE
Trees can increase property values and add to curb appeal. A Clemson University study found that homes with “excellent” landscaping can expect a sale price 6 to 7 percent higher than equivalent houses with “good” landscaping. Landscaping can bring recovery value of 100 to 200 percent at selling time. A mature tree can have an appraised value between $1,000 and $10,000. And nearly all Realtors believe that mature trees benefit the saleability of homes.

OTHER BENEFITS
The urban forest provides benefits to the entire community. They provide privacy, improve views, reduce noise and glare, and even compliment architecture. Birds and other wildlife rely on trees, bringing them into the urban environment, which improves the quality of life for everyone within the community.
SELECTING TREES FOR THE Boulevard

Like cities across the country, the City of Livingston has developed a list of trees suitable for growing in the boulevard—trees that do not have undesirable characteristics, such as being prone to storm damage or have root systems that heave sidewalks.

CITY APPROVED BOULEVARD TREES

LARGE TREES—Over 40 feet at maturity
- Black Walnut
- Bur Oak
- Northern Catalpa
- American Elm
- Select only DED-resistant cultivars
- Japanese Elm
- Elm hybrids
- Ginkgo
- Hackberry
- Honeylocust
- Kentucky Coffeetree
- American Linden
- Littleleaf Linden
- Norway Maple
- Freeman Maple
- Turkish Filbert

MEDIUM TREES —20-40 feet at maturity
- Amur Chokecherry
- Amur Corktree
- Amur maackia
- Ohio Buckeye
- Red maple (smaller varieties)
- Ussurian pear

SMALL TREES—Under 20 feet (Suitable for under power lines)
- Amur maple
- Flowering Crabapples
  - Not all species are under 20 feet.
  - Suggested varieties include:
    - Adams, Coralburst, Donald Wyman,
    - Harvest Gold, Indian Magic
    - Kelsey, Pink Spires, Prairiefire,
    - Red Jewel, Red Splendor, Spring Snow.
- Hawthorn
- Japanese Tree Lilac
- Serviceberry
- Tartatian maple

FOR MORE ON CITY-APPROVED BOULEVARD TREES, SEE PAGE 10
The City of Livingston welcomes property owners to plant trees within the public street right-of-way abutting their property. In cases where there’s a sidewalk, this is typically in the “boulevard” between the sidewalk and the street. Per Livingston’s tree ordinance, property owners are responsible for care and maintenance of boulevard, or street, trees.

Planting a street tree is a simple and meaningful way to invest in Livingston’s future. A typical tree costs $150-$200 and can be planted in less than an hour.

Volunteers may be available to help plant your tree. Email the City Tree Board at citytreeboard@livingstonmontana.org for details.

1. CHOOSE A PLANTING LOCATION
Selecting a good place for your tree will give the tree enough room to grow to maturity and prevent any problems with utilities, signs and other infrastructure.

All trees must be planted:
At least 35 feet from any street corner, measured from the curb line of the intersecting street.
At least 10 feet from any fire hydrant.

Tree spacing (the distance between the trunk of the new tree and the trunks of any adjacent trees) is:
35 feet for large trees.
25 feet for medium trees.
15 feet for small trees.

A typical boulevard is wide enough that it can accommodate large or medium trees, but some boulevards are narrower and should only have small trees. The required distance between the tree and any curb or sidewalk is:
3 feet for medium and large trees.
2 feet for small trees.

All trees should be at least 10 feet from any buried utility. The most common utility of concern is the water line that runs to the house from the main line beneath the street. The shutoff valve, often in or near the sidewalk, can give a rough idea of where the water line is.

Once you have an idea of where to plant based on the above requirements, mark the location with an “X” of spray paint or a survey flag or stake. Then, call 811 or go to montana811.org to request a free utility locate service. Within a couple of days, the City of Livingston and other utility providers will mark any nearby utilities. Once utilities have been marked, make any necessary adjustments to the planting location.

CONTINUED ON PAGE 5
2. CHOOSE A TREE
Select a large, medium or small tree species from this guide according to any constraints of the planting location. Other than that, have fun with it! Another consideration is the “look around rule.” Look around your block and neighborhood and notice what kinds of trees are there. If there’s a lot of one species, consider choosing something else. Not only is that more visually interesting, it contributes to resilience against tree pests and diseases.

Not all species in this guide may be readily available from a local nursery, so it’s a good idea to call around ahead of purchasing the tree to see what’s available.

3. APPLY FOR A PERMIT
Once you’ve determined the planting location and have an idea of a species or two you’d like to plant, you’re ready to apply for a planting permit. The purpose of the permit is to catch any potential problems before the tree is planted.

4. PLANT THE TREE
Once your permit has been approved and you’ve purchased your tree, you’re ready to plant! Planting a tree isn’t difficult, but paying attention to a few details can set your tree up for success.

BLACK WALNUT
Black walnut trees make great shade trees for larger properties. They commonly grow to 50 feet or taller and about as wide, but specimens of more than 100 feet have been recorded.

Email the City Tree Board at:
citytreeboard@livingstonmontana.org
Important information, Please read it all!

Your new tree will come one of three ways — the roots wrapped in burlap, in a plastic container, or bare root. Nowadays, black plastic containers seem to be the most common. No matter how your tree arrives, the same principles apply.

• THE BEST TIME TO PLANT IS IN THE SPRING
• CALL 811 BEFORE YOU DIG
• DIG THE HOLE TWICE AS WIDE AS THE ROOT BALL
• WORK QUICKLY SO THE ROOTS DON’T DRY OUT
• PLACE THE TOP-MOST ROOTS ARE JUST BELOW THE SOIL LINE
• BACKFILL WITH TOPSOIL AND WATER TO SETTLE THE SOIL
• STAKE THE TREE, IF NEEDED, TO PROVIDE STABILITY
• ADD 2-3” OF MULCH AROUND THE BASE
• WATER FREQUENTLY FOR THE FIRST YEAR

TREES IN BURLAP BALLS
These trees are field-grown and then dug up with ball of soil around the roots, which is then wrapped in burlap. Dig your hole twice as wide as the root ball and deep enough so the top of the root ball is just below the surface. The root flare should be just above the soil level. If you dug the hole a little too deep, just place some topsoil back in the hole. If you need to adjust the tree to make sure it’s straight, grab the burlap ball rather than the trunk. Cut and pull back the burlap below the soil level so the roots aren’t constricted. Backfill the hole and settle the backfill by watering thoroughly.

TREES GROWN IN CONTAINERS
These trees are grown and sold in a container. Dig planting holes wide and shallow, no deeper than the rootball’s size. Making the hole wide will help the roots as they grow and spread. The larger the area that you dig up around the hole in preparation for planting the tree, the easier it will be for its roots to spread and find food and water. Roots in container-grown trees tend to circle the container so it’s important to cut these roots by making four deep, vertical slices using a spade or knife to encourage outward growth. Speed matters. Don’t let the roots or rootball dry out. Care matters also. Don’t let the roots or rootball break.

BARE ROOT TREES
These trees are field grown and dug without soil on the roots. They’re stored and shipped in a cold, damp environment. It’s important to keep the roots moist before planting. After digging a wide planting hole, create a mound of dirt in the center and spread the roots evenly over the mound. Adjust the size of the mount to make sure the tree is at the correct depth. Backfill the hole, water to settle the dirt and then apply a layer of mulch.
PLANTING TREES WRAPPED IN BURLAP

Planting trees is as easy as digging a hole. You just have to follow a few simple guidelines to make sure your tree gets off to a good start for a long and healthy life.

Most trees come grown in black plastic containers or wrapped in burlap, so the best thing to do is to dig a hole that’s as deep as the container/burlap ball and at least twice wide. If you dig the hole too deep, simply put some soil back in the hole.

When you’re positioning the tree in the hole, it’s best to move it by grabbing the root ball rather than the trunk.

When you have the hole the right depth and width, take the tree out of the container and make several vertical slices through the roots. Tree roots grown in containers tend to circle the container so it’s best to break them up a bit so they grow out. Likewise, trees in burlap balls need to have the burlap cut away and the roots broken up a bit. For bare root trees, take a moment to position the roots around the mound you’ve created.

Lots of trees these days are grafted on to a hardy root stock, so you may find a graft union toward the base of the trunk. Below that is the root flare. Make sure the root flare is just above the soil line and the top-most roots are just below the soil.

Work quickly so the roots do not dry out. This is especially true of bare root trees.

Backfill with topsoil using water to help settle the soil. Don’t pack the soil too tight.

Add several inches of mulch around the tree in a donut shape, making sure the mulch isn’t right up against the trunk of the tree.

Stake the tree as needed using two stakes as show in the illustration. To protect your tree you may need to wrap it with a plastic tree guard. If you have deer in your neighborhood, you may need a wire mesh enclosure around your tree.

Finally, water your tree frequently.

ILLUSTRATIONS COURTESY OF CITY OF BOZEMAN, STREET TREE GUIDE

PLANTING CONTAINER TREES

PLANTING BARE ROOT TREES
Before you dig, call 811

LIVINGSTON IS IN PLANTING ZONE

Zone 4B
TEMPERATURES DOWN TO -25°
16” OF RAIN PER YEAR
190 SUNNY DAYS
4,500 FT ELEVATION

CARING FOR YOUR New Tree

THE BEST TIME TO PLANT
The best time to plant is early spring, just as the ground thaws. Fall can be tricky because we could get sub-zero temperatures in September or October. In other words, fall can be too late because trees won’t be able to get established so they can survive the freezing temperatures that can damage roots and stop moisture from reaching the tree. Spring is best because you need to give the tree enough time to establish roots.

WATERING
All new trees need to be watered for the first three or four years. Boulevard trees need extra water because of their location between the sidewalk and street. Trees need more water than your lawn, so you need to keep that in mind. All it takes is a little extra time to care for your tree. During the first year, trees need deep root watering several times a week. It’s easy to do. Just let a hose run for 20-30 minutes on low, or use a sprinkler on low for 1-2 hours, or dump one or two five gallon buckets on the tree. You can also get a soaker hose or deep watering stakes. For the second or third growing season, increase volume and decrease frequency as the tree becomes established. Deep water your tree every 7 to 10 days during the second year, and then several times a month during the third year. Once established, watering will depend on the species, climate, and soil conditions.

MULCHING
Mulch does so many important and positive things for your tree. Mulch helps reduce evaporation, moderates soil temperature, and reduces competition from grass and weeds. It will also help prevent lawn mower and weed eater damage. Mulch also provides protection in the winter, so check your mulch again in the fall. Spread 2 to 3 inches of organic mulch around the tree out to the drip line in a donut shape. It’s important to leave a 3 to 4 inch space around the trunk of the tree because if mulch comes in contact with the trunk it could invite fungi growth and/or insect damage. The city provides free mulch at the transfer station, or you can use leaves, shredded bark, or wood chips that are available for free at RY Lumber. And you can buy bagged mulch at nurseries, or most hardware stores.
STAKING YOUR TREES
Two stakes may be needed to stabilize the tree, especially in Livingston’s wind. Make sure tree trunk is protected with some soft, durable material. Lots of people use a foot or two cut from an old hose. Two stakes properly placed should hold the tree upright and provide flexibility for the tree to move. Remove the stakes after the first year of growth.

Stakes may not be necessary for small trees. And experts say that if the tree you bought was grown and dug properly—and if it was properly planted—you do not need stakes. Research has shown that young trees will establish more quickly and develop stronger trunks and root systems, and the trunks will develop a more natural taper if they are not staked.

PROTECTING YOUR TREE
Many nurseries sell trees with the option to include an inexpensive plastic sleeve that goes around the base of the trunk. This small investment helps to protect the tree against damage from weed-eating, mowing and hungry rodents. Deer are prevalent throughout much of Livingston, and bucks rubbing their antlers on the trunk of a young tree can easily kill it. If you’ve noticed deer or rubbed trees in your neighborhood, or are unsure, the best way to protect your new tree is to surround it with 4- or 5-foot-tall fencing (welded wire or similar) that’s fixed to the stakes. Plastic protectors that extend up the trunk may be recommended and offered by the nursery when purchasing a tree. Although these are primarily intended to prevent sun scald (caused by sun warming the trunk in winter or early spring, prematurely waking up dormant tissue that then is killed by freezing), the protectors can also prevent deer damage. But because they should be applied in the fall and removed in the spring, the tree is still vulnerable to deer. Maples, honey locusts, lindens and other thin-barked young trees are most vulnerable to sun scald and benefit from plastic trunk protectors or other products like cloth tape that are wrapped around the trunk.

PRUNING
Don’t prune your tree during the first year, unless you’re removing dead or broken branches. If you do prune your tree, prune it to shape the young tree, but don’t cut back the leader. Remove crossing branches and branches that grow back towards the center of the tree. As the young trees grow, remove lower branches gradually to raise the crown, and remove branches that are too closely spaced on the trunk.

FERTILIZER
Do not fertilize your tree during the first year.

CALL BEFORE YOU DIG
In many areas of Livingston, water lines typically come in from the street; sewer and natural gas come in from the alley. While water and sewer are often deep underground your still want to avoid planting on top of them. However, natural gas lines can be about 18 inches deep. Always call 811 before you dig.

Did you know that girdling a sapling with a weed eater is the number one cause of death for trees?
Mulch helps prevent that.
CONTINUED FROM PAGE 3

LARGE TREES (OVER 40 FEET AT MATURITY)

**GINKGO**
Unique tree native to southern China and widely used as boulevard tree elsewhere in U.S., now making inroads to Montana. Tolerant of a range of conditions but borderline hardy for our zone. Deserves experimentation in Livingston.
Growth rate: Slow-Medium
Mature size: 25-50’ tall x 25-35’ wide Zone: 4

**BLACK WALNUT**
Stately shade tree with several fine specimens in Livingston. Produces large edible nuts that drop onto sidewalk and streets, a consideration when choosing this tree. Releases a natural chemical that can affect some neighboring garden plants and shrubs.
Growth rate: Medium
Mature size: 50-75’ tall x 50-75’ wide Zone: 4

**BUR OAK**
A tough, majestic tree to plant for future generations. Native to eastern Montana and many fine specimens in Livingston. Drought-tolerant, adaptable and full of character. Drops acorns.
Growth rate: Slow
Mature size: 70-80’ tall x 70-80 wide Zone: 3

**NORTHERN CATALPA**
Large, heart-shaped leaves, trumpet-shaped flowers and dangling bean pods. This native tree grows in a range of soils and is drought tolerant. Rare in Livingston but has proven itself in the region.
Growth rate: Medium-Fast
Mature size: 50-60’ tall x 20-40’ wide Zone: 4

**AMERICAN ELM**
Tough, adaptable shade tree once the flagship boulevard tree in many Montana cities before devastated by Dutch elm disease. Select only DED-resistant cultivars. Requires structural pruning as young tree to set up for success later in life. Recommended cultivars: Prairie Expedition, Princeton
Growth rate: Moderate to fast
Mature size: 60-70’ tall x 60-70’ wide Zone: 4
JAPANESE ELM
Elm native to Japan and northeast Asia that is typically smaller than American elm but similarly adaptable and hardy. Select only DED-resistant cultivars. Recommended cultivars: Discovery, Northern Empress
Growth rate: Moderate to fast
Mature size: 20-25’ tall
Zone: 4

ELM HYBRIDS
Hybrids of Japanese elms and others. Adaptable and hardy. Select only DED-resistant cultivars. Recommended cultivars: New Horizon, Accolade, Triumph
Growth rate: Moderate to fast
Zone: 4-5

HACKBERRY
Under planted tree that’s up to the task of thriving in Livingston. A native tree that tolerates heat, wind, drought and a variety of soils. Interesting corky bark, small fruit and a finely branched canopy. Subject to nipple gall that can be unsightly but doesn’t harm tree.
Growth rate: Medium-Fast
Mature size: 40-60’ tall x 40-60’ wide
Zone: 3

HONEYLOCUST
Forms a large, open canopy with fine-textured leaves that cast dappled shade. North American native that’s tough, drought-tolerant and adaptable. Recommended cultivars: Northern Acclaim, Skyline
Growth rate: Medium-Fast
Mature size: 30-70’ tall x 30-70’ wide
Zone: 3

KENTUCKY COFFEE TREE
An adaptable, drought-tolerant and pollution-tolerant tree native to the Midwest and reliably used in boulevards across much of the country. Deserves experimentation in Livingston. Unique leaves and growth habit. Produces large seed pods.
Growth rate: Slow
Mature size: 60-75 tall x 40-50’ wide
Zone: 3-5

AMERICAN ELM
Tolerant and adaptable tree with classic maple qualities. The most common deciduous tree in Livingston besides ash, although not yet overplanted. Fast growth and dense shade. Green- and red-leaf varieties available.
Growth rate: Fast
Mature size: 40-60’ tall x 40-50’ wide
Zone: 4

RED MAPLE
Adaptable maple that is the most widespread native tree in the Northeast. May suffer from iron chlorosis in alkaline clay soils. Crossed with Silver maple for Freeman hybrids.
Mature size: 40-60’ tall x 35-45’ wide
Zone: 3

TURKISH FILBERT
Adaptable tree with pyramidal form, heavy-textured foliage and interesting catkins. Drops edible nuts. New to Livingston...
Growth rate: Moderate
Mature size: 40-50’ tall x 15-35’ wide
Zone: 4

NORWAY MAPLE/HELENA MAPLE
Tolerant and adaptable tree with classic maple qualities. The most common deciduous tree in Livingston besides ash, although not yet overplanted. Fast growth and dense shade. Green- and red-leaf varieties available.
Growth rate: Fast
Mature size: 40-60’ tall x 40-50’ wide
Zone: 4

FREEMAN MAPLE
Hybrid of silver maple and red maple for fast growth with stronger structure. May suffer from iron chlorosis in our alkaline clay soils. Many planted in Livingston. Popular cultivars are Autumn Blaze and Sienna Glen.
Mature size: 50-60’ tall x 40’ wide
Growth rate: Fast
Mature size: 40-60’ tall x 20-40’ wide
Zone: 5
AMUR CORKTREE
Once established becomes a tough tree known to tolerate hot and dry sites as well as a range of soils. Spreading form and interesting corky bark. Native to China and Japan, new to Livingston.
Growth rate: Moderate
Mature size: 30-45’ tall x 30-60’ wide
Zone: 3

AMUR CHOKECHERRY
Rare in Livingston but worth more attention. Hardy tree with golden, birch-like bark, fragrant white flowers and edible fruit good for birds. Native to northeast Asia.
Growth rate: Moderate/fast
Mature size: 15-25’ tall x 15-25’ wide
Zone: 3

AMUR MAACKIA
Making inroads in our region and gaining a reputation as an adaptable, tough and interesting tree. Great option for a smaller tree. Round shape, pinnacle flowers that attract pollinators, peeling attractive bark. Native to China and Korea.
Growth rate: Slow
Mature size: 20-30’ tall x 20-35’ wide
Zone: 4

OHIO BUCKEYE
North American native with lots of character. Prefers moist, well-drained soils but has proven itself throughout Livingston. Large candle flowers, red-orange fall color and inedible nuts that need to be raked.
Growth rate: Slow
Mature size: 20-40’ tall x 20-40’ wide
Zone: 3

USSURIAN PEAR
Hardy pear that’s more ornamental than for eating, although the one-inch fruits can be made into jelly. Round, dense growth. Uncommon in Livingston. Native to northeast Asia.
Growth rate: Medium
Mature size: 15-30’ tall x 15-20’ wide
Zone: 3

JAPANESE TREE LILAC
Related to shrub lilacs. Forms a single-trunked, somewhat narrow tree. Cream-colored blooms in
AMUR MAPLE
Hardy, adaptable little tree that tolerates drought. Select single-stem specimens. Popular cultivar Hot Wings has bright red samaras (helicopter-like seeds).
Growth rate: Moderate
Mature size: 15-20’ tall x 15-20’ wide
Zone: 3

TREE LILAC
Related to shrub lilacs. Forms a single-trunked, somewhat narrow tree. Cream-colored blooms in early summer. Hardy and adaptable. Smaller cultivars such as Ivory Silk suitable for planting under some power lines.
Growth rate: Medium
Mature size: 20-25’ tall x 10-20’ wide
Zone: 3

CRABAPPLE
Generally hardy and adaptable, with a range of shapes, bloom colors and foliage colors. Beautiful when blooming in spring. Some cultivars may be taller than 20 feet and not suitable for under power lines. Preferred cultivars are fruitless (i.e. Spring Snow) or have small, clinging fruit.
Growth rate: Medium
Mature size: 10-20’ tall x 10-20’ wide
Zone: 3

JAPANESE TREE LILAC
Growth rate: Medium
Mature size: 20-25’ tall x 10-20’ wide
Zone: 3

TARTATIAN MAPLE
Closely related and similar to Amur maple but tends to be a bit larger and stouter. Adaptable, low-maintenance and tolerates drought. Select single-stemmed specimens.
Growth rate: Moderate
Mature size: 15-20’ tall x 15-20’ wide
Zone: 3

SERVICEBERRY
Cultivars of berry shrubs native to North America. Select single-stem forms of cultivars like Autumn Brilliance. Red fall color and edible berries favored by birds.
Growth rate: Moderate
Mature size: 15-25’ tall x 15-20’ wide
Zone: 3

The Tree Board advises the City Commission on tree-related matters, including planting and maintenance of public trees in parks and boulevards. The board invites public feedback and ideas, donations to the city tree fund, and interest in occasional volunteer opportunities.

Email the City Tree Board at:
citytreeboard@livingstonmontana.org

The Tree Board meets the third Thursday each month at noon, normally, in the Community Room of the City-County Complex.