

TREES IN THE CITY:

*A Homeowners Guide to Planning,
Planting, and Pruning Trees*



PROVIDED BY THE MUNCIE URBAN FORESTRY COMMITTEE

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A CHINESE POET ONCE WROTE,

“If you are thinking a year ahead, sow a seed.

If you are thinking ten years ahead, plant a tree.

If you are thinking one hundred years ahead, educate the people.”

Muncie's Urban Forestry Committee is providing this educational guide in the spirit of planting trees for the future of the urban forest. Our goal is to inform homeowners about the many benefits of trees, the ease with which you can obtain and plant trees, and the proper maintenance of trees.

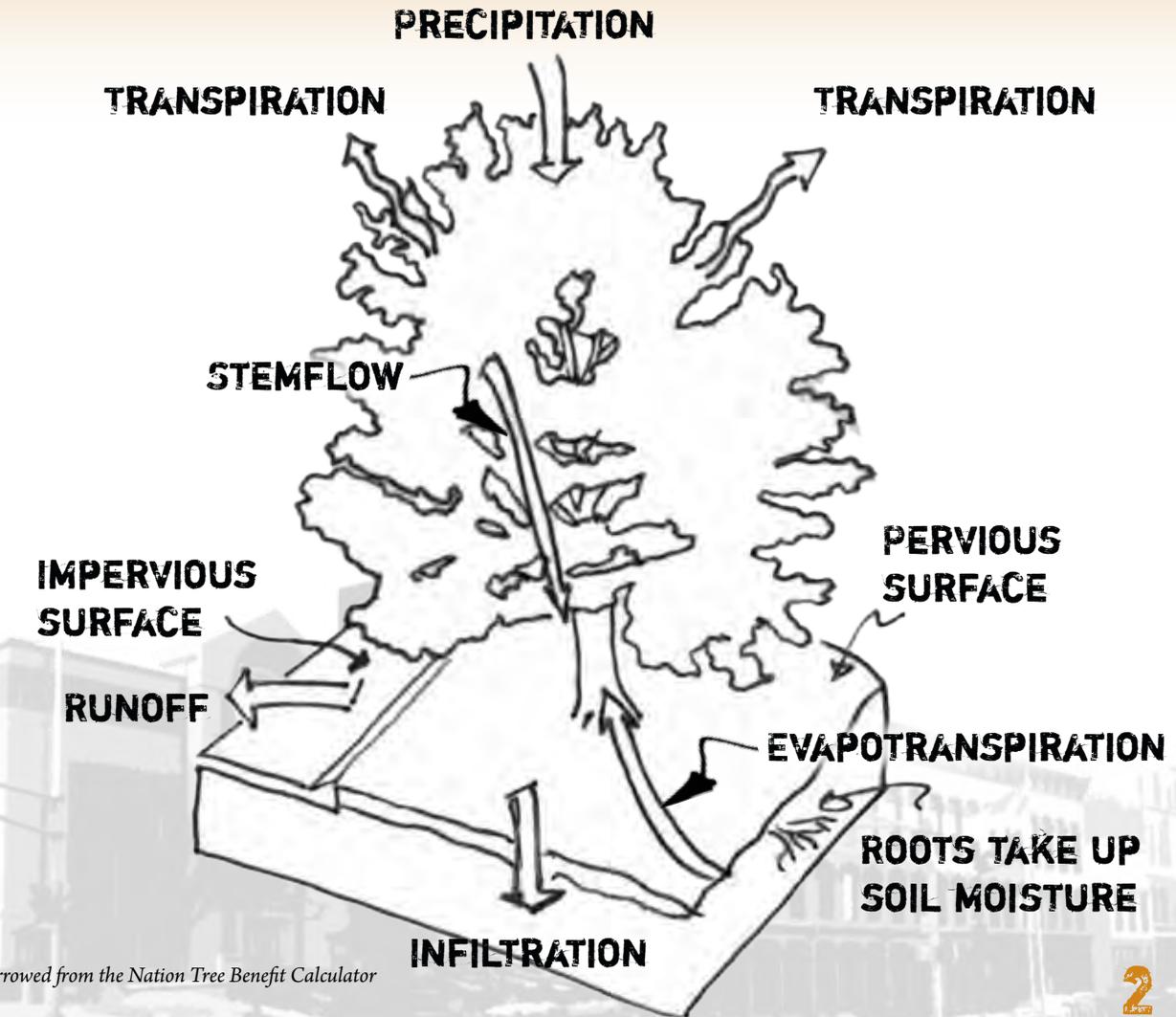
We hope this guide will inspire more people to plant trees and serve as a useful resource to those individuals committed to preserving Muncie's urban forest.

MANAGING STORMWATER RUNOFF WITH TREES

Stormwater runoff from any rain event can cause severe damage to our water quality just by rinsing off hard surfaces and sending runoff to our stormdrains, eventually leading to the White River. Pollutants such as oils, gas, salt, litter, sediment, sand and pet waste can damage aquatic habitat and contaminate our drinking water. These types of pollutants are called non-point source pollutants and cause a considerable amount of our water pollution today.

Medium and Large size trees can absorb hundreds of gallons of stormwater runoff a year. A single mature oak tree can consume (transpire) over 40,000 gallons of water in a year. In urban and suburban settings a single deciduous tree can intercept from 500 to 760 gallons per year; and a mature evergreen can intercept more than 4,000 gallons per year.

Trees act as storage reservoirs and can control runoff at the source. Trees reduce runoff by intercepting and holding rain on leaves, branches and bark. Trees increase infiltration and storage of rainwater through the tree's root system. The trees roots can also help with reducing soil erosion by holding soil together.



Borrowed from the Nation Tree Benefit Calculator

PLANNING

Ensure proper plant placement and minimal maintenance before you plant in the urban forest!

DECIDUOUS AND CONIFEROUS TREES

Deciduous trees lose their leaves in the winter. Coniferous trees, such as evergreens, keep their needles through the winter. Which one is right for your property?

TREE LOCATION

Take into consideration overhead power lines, nearby pavement and buildings, underground utilities and existing tree canopies.

TREE SOIL, SUN, AND MOISTURE NEEDS

Different tree species have varying needs for soil, sun, and water. Be sure to choose the right tree for your site.

TREE SPREAD

How wide will the tree grow? Will it grow into a house or fence?

TREE GROWTH RATE

How long will it take for your tree to reach its full height? Slow growing species such as Oaks live longer than fast growing species such as Silver Maples.

TREE HEIGHT

What is the mature height of the new tree? Will the tree grow into anything when it is fully grown?

FRUIT-BEARING TREES

Some trees produce fruit that can fall on busy sidewalks, driveways, or pool decks and be messy and hazardous. Yet, some tree fruit can attract birds and other wildlife.

TREE SHAPE

A columnar tree will grow in less space. Spreading shade trees will provide the most shade. Which do you prefer?

TREE HARDINESS ZONES

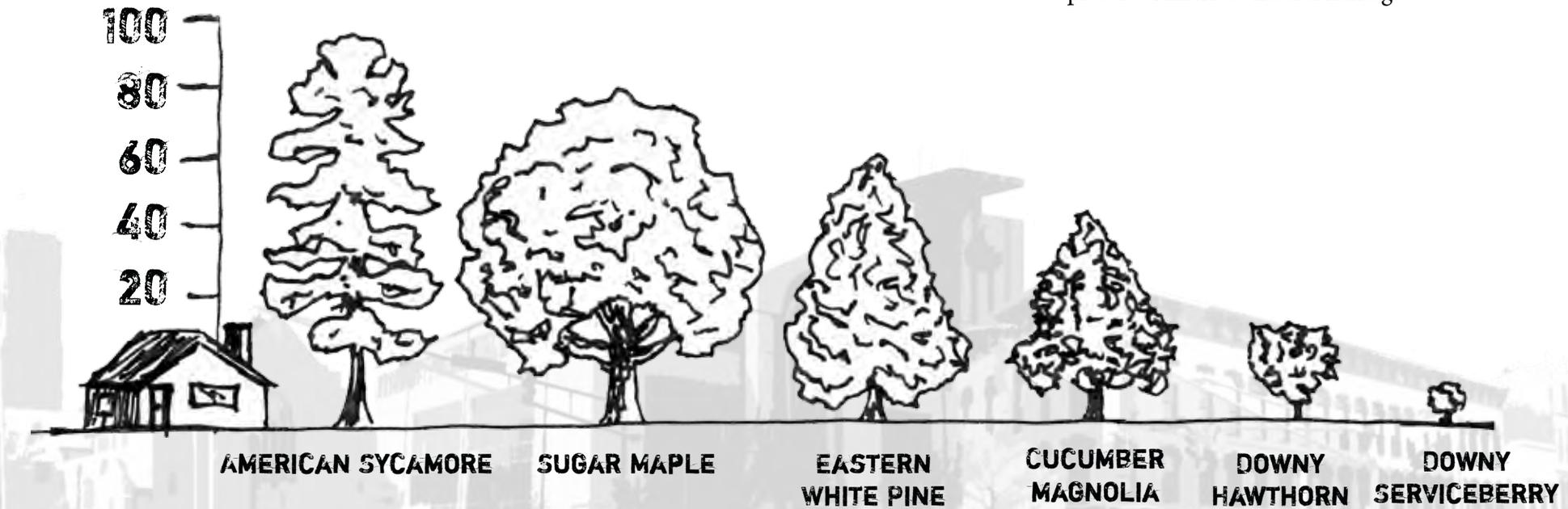
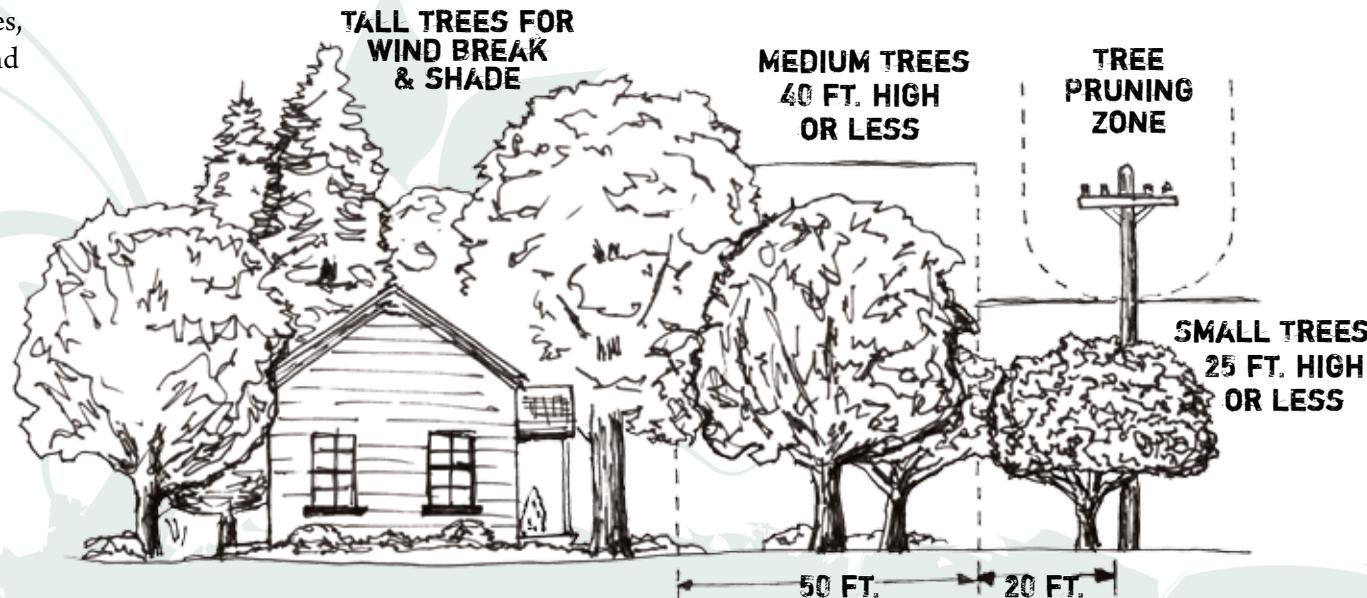
Hardiness zones indicate the temperature extremes in which a particular tree can be expected to grow. Muncie is in Zone 6.

THE BENEFITS OF PLANTING NATIVE TREES

Native Indiana trees provide food and cover for local wildlife and will be more resistant to local diseases and insects. They also require fewer pesticides, fertilizers and water. Furthermore,

native trees help support a healthy and diverse urban forest. They can grow larger and live longer than their non-native counterparts, and can also be more effective in removing carbon dioxide from the air and storing the carbon in their leaves.

Most importantly, Indiana's native trees help preserve America's natural heritage.



INDIANA'S NATIVE TREES

American Beech
American Basswood
American Chestnut
American Hornbeam
American Plum
American Sycamore
Bald Cypress
Bitternut, Pignut, Shagbark,
and Shellbark hickory
Black, Burr, Chestnut, Chinquapin,
Pin, Northern Red, Swamp
White, Shingle, Shumard,
Overcup, Northern Pin,
Scarlet and White oak
Black and Pin cherry
Black and White walnut
Black Willow
Cucumber and Umbrella magnolia
Downy Hawthorn
Downy Serviceberry
Eastern and Swamp cottonwood
Eastern Hemlock
Eastern Redbud

Eastern Red Cedar
Flowering Dogwood
Hackberry
Honey or Black locust
Ironwood
Jack, Virginia, Eastern
and White pine
Kentucky Coffeetree
Large Tooth and Quaking aspen
Northern Catalpa
Ohio and Yellow buckeye
Paw Paw
Pecan
Persimmon
River, Paper and Yellow birch
Red Mulberry
Red, Silver, Black and Sugar maple
Sassafras
Slippery, American, Rock
and Winged elm
Sweetgum
Tuliptree
Yellowwood

SOME RECOMMENDED STREET TREES

FOR PLANTING UNDER POWER LINES (< 25 FEET) (*Lawn strip must be at least four feet wide*)

Autumn Brilliance and Trazam
serviceberry
Flowering Crabapple
Japanese Tree Lilac
Winter King, Lavelle, Cuzam
and Thornless hawthorn

MEDIUM TREES (<50 FEET) (*Lawn strip must be at least six feet wide*)

Heritage® and
Dura-Heat™ riverbirch
Aristocrat, Chanticleer and
Autumn Blaze ornamental pear
Red Sunset®, Pacific Sunset®
and October Glory® red maple
Imperial®, and Shademaster®
thornless honeylocust

LARGE TREES (> 50 FEET) (*Lawn strip must be at least eight feet wide*)

Autumn Gold and Princeton
Sentry® ginko
Green Mountain®, Freeman,
Autumn Blaze® and Legacy
sugar maple
Greenspire and Glenleven
littleleaf linden
Northern Red, English,
Skymaster™ and Westminster
Globe™ oak
Redmond and Wandell basswood

IMPORTANT THINGS TO KNOW ABOUT TREES

HOW TO PROPERLY PRUNE A TREE

The reasons to prune a tree include:

- Removal of dead branches or branches that are crowded or rubbing together.
- Elimination of hazards such as broken or cracked branches.
- Removing the lower branches to provide clearance for pedestrian and vehicular traffic.

DO NOT TOP TREES!

Cutting main branches back to stubs is costly. Topping creates weak young branches while also creating wounds that invite insects and disease. Trees can be properly pruned to control height and increase sunlight. This also maintains the natural shape of the tree and promotes a healthy urban forest. Give it a try!

1/3 RULE OF PRUNING

When pruning ANY branches/limbs, always prune back to the nearest branch/limb at least 1/3 its size and prune outside the branch collar without leaving a stub.

The main lateral branches should be at least one third the size of the trunk diameter. If a main branch needs to be removed, prune it back to the next limb or to the trunk. Do not prune back a main branch so that you leave a stub.

HOW TO MAKE A PRUNING CUT ON A LARGE BRANCH

- A) Make a partial cut from beneath.
- B) Make a second cut from above several inches out and allow the limb to fall.
- C) Complete the job with a final cut just outside the branch collar.



PRUNING SMALL BRANCHES

When removing small branches on trees and shrubs to control the height or shape, first locate the lateral bud along the branch. Next make a sharp, clean pruning cut one-half inch above the lateral bud. It is always best to prune until you reach another main branch if possible.

THE VALUE OF MULCH

Mulching with either shredded bark or wood chips maintains moisture, suppresses weeds, protects the tree from weed-eater or lawn mower damage, and looks nice. For more information about mulching see page 10.

GIRDLING KILLS TREES

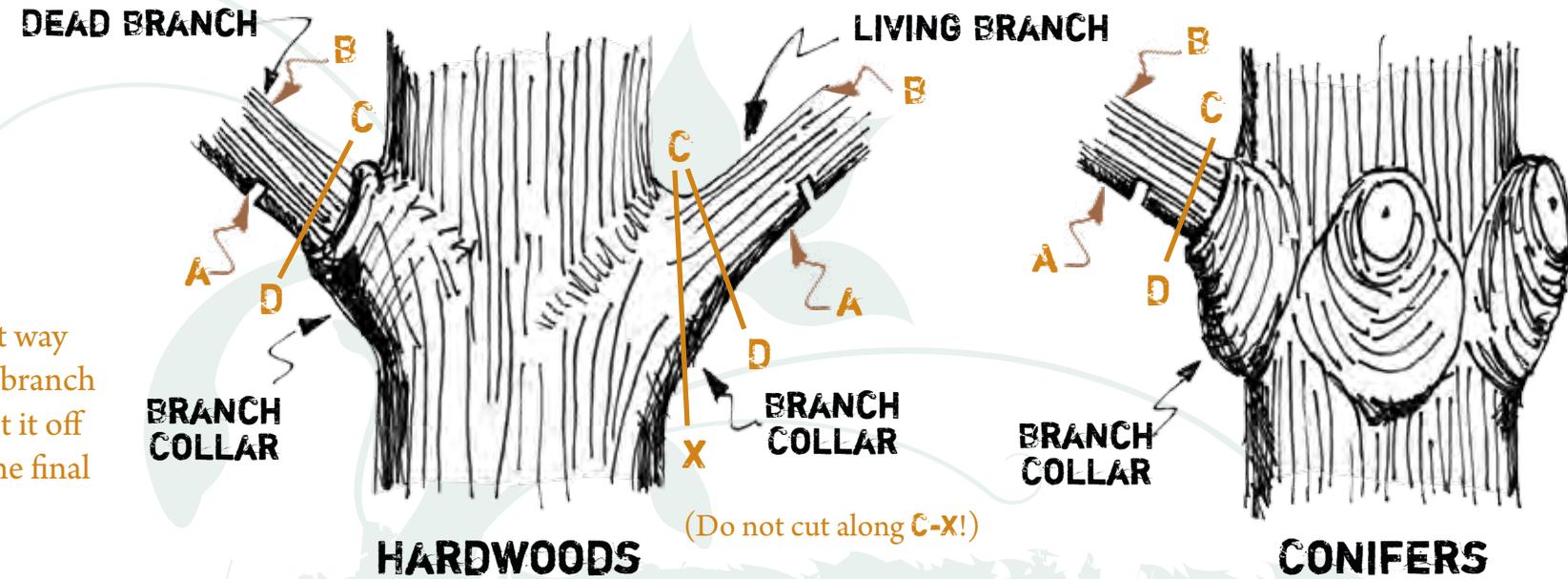
Girdling is an injury to the bark of a tree trunk and extends around much, if not all of the trunk, damaging the areas that carry water and nutrients to the tree canopy. Often the damage is caused by repeated contact with lawn mowing equipment or other mechanical means.

YOUR STREET TREES MAY BE CITY TREES

In Muncie, trees located between the sidewalks and streets, or just planted along a street could be city-owned. Be sure to contact the Urban Forester and check the city tree ordinance.

Check out: www.cityofmuncie.com,
www.muncieurbanforestry.org
or call (765) 747-4858

PROPER PRUNING PRINCIPLES



First cut part way through the branch at **A**, then cut it off at **B**. make the final cut at **C-D**

WHERE ROOTS REALLY GROW

- Along with moisture and nutrients, tree roots need oxygen to survive.
- The framework of the major tree roots usually lies 8-12 inches below the surface.
- Roots often grow outward to a diameter one to two times the height of the tree, depending on the tree species.

HOW TO PLANT A TREE

Planting Tip: Never let your tree roots dry out!

BALLED AND BURLAP TREE:

Set the tree in the planting hole then cut off as much of the wire basket as you can along with the burlap.

CONTAINERIZED TREE:

Carefully remove the tree from the container.

Break up the roots so they are fanning out from the tree trunk, not circling. Don't worry, the roots will regenerate quickly once planted.

BARE-ROOT TREE:

It is best to plant bare-root trees immediately, in order to keep the fragile roots from drying out. If you can't plant because of weather or soil conditions, store the trees in a cool place and keep the roots moist.

Unpack tree and soak in water 3 to 6 hours.

Do not plant with packing materials attached to roots, and do not allow roots to dry out.

Remove any grass within a three-foot circular area.

Dig a hole 2-3 times wider than the tree's rootball and the same depth of the rootball, so the roots can spread without crowding.

To aid root growth, turn soil in an area up to 3 feet in diameter.

Plant the tree with the tree flare at the soil level. (*ANSI 300 National tree transplanting standards.*)

Partially fill the hole, firming the soil around the lower roots.

Do not add soil amendments.

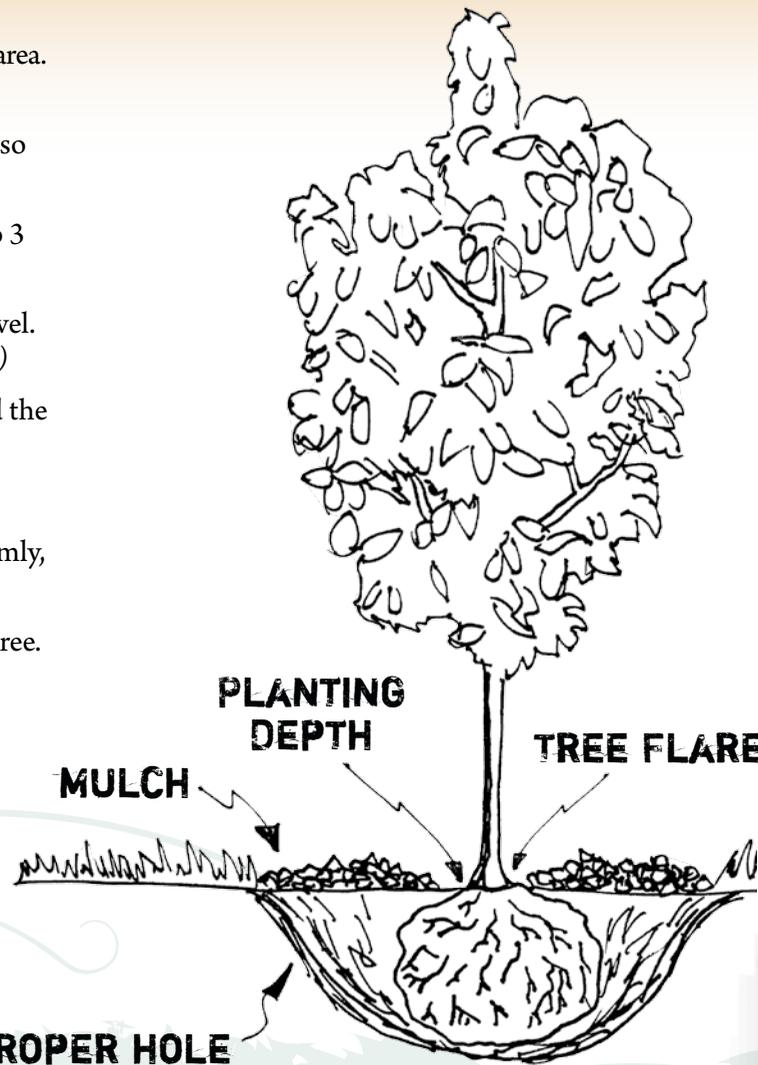
Shovel in the remaining soil. It should be firmly, but not tightly packed with your heel.

Construct a water-holding basin around the tree.

Give the tree plenty of water.

811 REMEMBER TO
CALL BEFORE YOU DIG!

(It's the law, & it's free!)
1-800-382-5544
(For all utilities and sewer.)

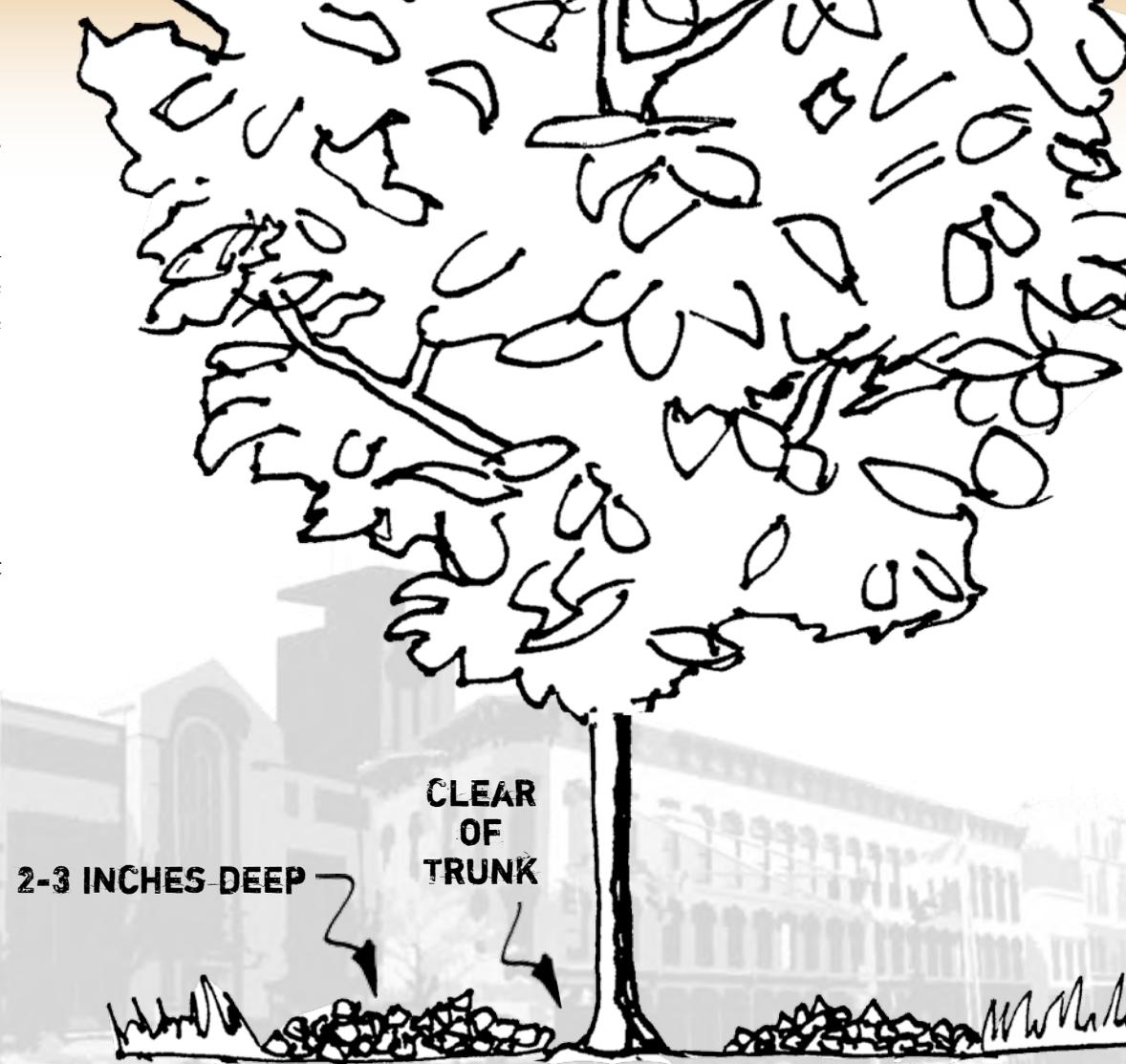


TREE CARE AFTER PLANTING

Water the tree for at least the first two years, but do not over-water. Over-watering can leave the tree standing in water. A newly planted tree requires 3-5 gallons of water per week, per inch of diameter of tree trunk during summer and droughts. If it rains an inch or more, you may not need to water. If you aren't sure if the tree needs watered, try gently probing into the soil around the rootball to see if the soil is damp. A thorough soaking is much better than light, frequent watering.

HOW TO PROPERLY MULCH A TREE

The mulch should be no more than 2-3 inches deep. Make sure it is kept clear from the trunk. If the mulch is left mounded against the base of the trunk, it could cause rot and unhealthy root growth into the mulch instead of the soil.



**FOR MORE INFORMATION,
VISIT THESE WEBSITES:**

www.treesaregood.com
www.arborday.org
www.treelink.org
<http://www.iufc.org/>



Josh Newsome Tree Surgery

Flat Land Resources, LLC

Robert Cooper
Audubon Society



TREE CITY USA



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