



Minnesota
Tree Care Advocate's

Minnesota
Citizen Pruner

- : Newport and St. Paul Park : -
Advanced Training

Cooperative University of Minnesota and City of Newport and St. Paul Park program

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February 2016

For copies of this, e-mail request to info@mntca.org

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Developed by Valerie McClannahan based on a TreesNY Program
for the Minnesota Citizen Pruner Program

Acknowledgements

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PROGRAM OVERVIEW

Minnesota Citizen Pruner Program Introduction

Citizen Pruner is a pilot program to increase local capacity by working with municipalities and engaging citizens in community forestry. Citizen Pruner volunteers are trained in tree identification, biology, and pruning techniques to help maintain tree health and public safety. If this pilot program is successful, Citizen Pruner certification will be valid for three years.

Renewal competency assessments will be available online or through postal mail at no cost. Recertification is issued at the end of each calendar year.

Citizen Pruners are needed now more than ever. As municipal budgets continue to be cut, the aid from citizens becomes increasingly more important to communities. Citizen Pruners are able to manage small branches near the ground while tree care professionals can focus on larger branches higher in the tree canopies. Completing this ground work is vital for clearing sight lines and blocked sidewalks.



Citizen Pruner Code of Conduct

Citizen Pruner volunteers serve at the discretion of the Citizen Pruner program. Just as it is a privilege for the Citizen Pruner program to work with volunteers who offer their time and talent, volunteer involvement in the program is a privilege and responsibility, not a right.

The purpose of the standards of behavior is to ensure the safety and well-being of all Citizen Pruner participants (i.e. target audiences, staff, other professionals, volunteers) and to ensure a positive, enjoyable experience for volunteers.

Citizen Pruners will:

- uphold volunteerism as a way to meet the urban forest needs of Minnesota
- represent the program with dignity and respect by being a positive spokesperson for the program and the city

- be courteous, civil, and respectful.

Failure to honor these standards can result in Citizen Pruner status removal. Not honoring these standards must be confirmed. The program director must authorize any termination.

Resolution of the conflict may lead to reinstatement, reinstatement with limitations, reassignment of volunteer duties, or removal from the program.

Program Staffing

- Gary Johnson - Director: directs and administers the program; oversees development and delivery of education and program operations. Contact: johns054@umn.edu
- Bruce Hanson – Newport City Citizen Pruner Coordinator; will setup volunteer events for participants. Contact: BRHanson@mninter.net
- Rob Weldon - St. Paul Park City Citizen Pruner Coordinator; will setup volunteer events for participants. Contact: rweldon@stpaulpark.org

Communications

- Minnesota Tree Care Advocate website – www.mntca.org. This site contains program information and resources.
Password for Newport and St. Paul Park Citizen Pruner page is: N3wp0rt&StPaulPark
- Minnesota Tree Care Advocate email – citizenpruner@mntca.org. This email is the main way to contact program coordinators.
- Minnesota Tree Care Advocate Headquarters – 115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108

Programs Guidelines, Policies, and Procedures

Minimum Age Requirement

Participants in the Citizen Pruner program must be 18 years or older, confirmed with a valid photo I.D. or have signed parental consent.

Citizen Pruner Volunteer Status Classification

Citizen Pruner in Training – volunteers who are in the process of completing the Core Course education.

Active Citizen Pruner – volunteers that have completed the Core Course education, passed the competency assessment, reported a minimum of 10 volunteer hours each year or attend three volunteer events hosted by the city, and stay current by passing the renewal competency assessment.

Temporary Inactive Citizen Pruner - volunteers on temporary leave for up to one year that have completed the Core Course education, passed the initial competency assessment, have at least one year of volunteer status, and passed the renewal competency assessment. Temporary inactive status allows for a major change in lifestyle such as new additions to the family, an illness, loss of loved one, or other

circumstances that makes it unrealistic to fulfill volunteer hours.

Citizen Pruners in temporary inactive status may continue to volunteer, submit hours, and take classes.

The Citizen Pruner must return to active status after one year of temporary inactive status.

Requests for temporary inactive status will be accepted all year. Review and consideration of requests will occur within eight weeks of application submission. Applications are reviewed by program coordinators and city staff.

The temporary inactive status application is available at www.mntca.org/cp-temporary-inactive.

Emeritus - volunteers in semi-active status who have made significant contributions to the program but need to limit active participation due to retirements, health issues, or family obligations. Only active Citizen Pruner with a minimum of 10 years or 1,000 volunteer hours are eligible for this status. Emeritus Citizen Pruners may continue to serve as a resource to other volunteers and participate in activities, but must pass a renewal competency assessment to resume pruning.

Requests for emeritus status are accepted during September and October. Review and consideration of requests will occur during November and December. Final decisions will be made no later than December 31. Applications are reviewed by program coordinators and city staff.

Certification and Recertification

Core Course

New volunteers must complete eight hours of Core Course education and pass the initial competency assessment by answering 75% of the questions correctly to be a certified Citizen Pruner in active status, and will receive a certificate and membership card. Certification is valid for three years.

Recertification

Recertification is accomplished through completing 10 volunteer hours each calendar year and passing the renewal competency assessment with 75% correct answers every three years.

Renewal competency assessments are available online or through postal mail at no cost. Recertification is issued at the end of each calendar year. Recertification is valid for three years after passing the renewal competency assessment.

Volunteering

Citizen Pruners are expected to complete 10 hours of volunteerism or attend three city hosted pruning events every calendar year (between January 1st-December 31st). Hours need to be recorded and delivered to the program coordinator no later than January 31 of the following year. Volunteers will receive a notice of completion that recognizes and confirms the volunteers' status for the upcoming year.

Data Collection

Data collection by Citizen Pruners is crucial. Data is used to generate reports that are given to stakeholders and municipalities. Citizen Pruners are expected to take data on each tree pruned, noting location of each tree pruned, and all aspects of pruning that took place on each tree.

Forms are given to each group of Citizen Pruners at the start of a volunteer event. One volunteer from each group collects data. The data collector should have legible handwriting, and must be accurate and concise.

Once data is collected in the field, one volunteer from each group submits the data online at <http://www.mntca.org/mcp-newport-st-paul-park>. The original paper form is given to the city contact. See the data collection form in Appendix A. To print data collection forms go to <http://www.mntca.org/mcp-newport-st-paul-park/newport-st-paul-park/>.

Public versus Private Property

Only trees will be pruned on public property such as parks, rights-of-way, and boulevards. Public property boulevards are typically within 10-15 feet of the curb, but this can vary from street to street. If it's questionable whether a tree is on public or private property, ask city staff. Otherwise, do not prune the tree.

How to Work with the Public

The public may be interested in what volunteers are doing. Provide a courteous explanation about the Citizen Pruner program, and the partnership between the city and the University of Minnesota. Many people are concerned and care deeply about trees, especially if it is right in front of their home. Most people are positive, a few may be negative. It is important to remember that you are an ambassador on behalf of the city and the Minnesota Citizen Pruner program, and you may be able to recruit new volunteers to help care for your public trees. Provide interested citizens with a Tree Care Advocate card (see Appendix B).

Show your Citizen Pruner ID to anyone who questions what you are doing and explain that you have taken a course and a competency assessment for certification. Inform them that what you are doing is helping the trees. Emphasize that you have been authorized by your city to prune these tree. Thank them for their concern, as we need more people who are concerned about their street trees. If a citizen exhibits resistance to your pruning activities, discontinue pruning, and move to another location if possible. Note the location you discontinued work and inform your city contact of the interaction.

As the public sees you work, they will see you as a source of knowledge and may ask you to look at their own tree. Do not answer questions about private trees because it could be a liability to volunteers and the program, and can infringe on private industry. In a courteous manner explain to them the Citizen Pruner program, and the partnership between the city and the University of Minnesota. Recommend they contact a Certified Arborist and provide them with the Tree Owner's Manual card (see Appendix C).

All questions involving public property, including trees and infrastructure, should be directed to the city. If possible, provide the citizen with the appropriate city contact information.

General city questions should be directed to:

Newport City Hall: 651-459-5677
St. Paul Park City Hall: 651-459-9785

Any questions about public trees should be directed to:

City of Newport Public Works: 651-459-2475
City of St. Paul Park Public Works: 651-459-3730

Safety

There are a number of safety regulations in place for the safety of volunteers, citizens, and the protection of surrounding infrastructure. Volunteers are expected to follow all of the regulations set by the Citizen Pruner program and by the city. If the Citizen Pruner program discovers that safety precautions are being disregarded by any volunteer, the Citizen Pruner status will be suspended. The volunteer will be immediately placed on temporary inactive status and may be placed on inactive status following decisions made by the city contact and the program director.

Citizen Pruner safety regulations include:

- Electricity can flow through branches.
 - Never prune trees or branches that are within 10 feet of utility lines.
- Never get on a ladder.
 - If pruning can't be done with both feet on the ground, do not do it.
- Be aware of your surroundings.
 - Sometimes you won't be able to prune things you want to without stepping into the street. Never endanger yourself or others to make a pruning cut, and don't make a cut unless you can make a good cut. Never enter a busy street to prune. If you are on a street that is not busy, one person may prune but the pruner's partners must stop what they are doing and only watch for cars.
 - When you are pruning, or others are pruning around you, make sure that you or others stand clear of the branch drop zone. Even seemingly small branches can injure a person and it's important that you are always aware of the potential safety hazards that surround us.
- Only use the tools provided to you.
 - Do not bring tools from home. This includes everything from pruning shears to chainsaws. For your safety and the safety of the tree, you are only allowed to use tools provided to you by the city, unless approved by the city forester.
- Dress code:
 - wear city supplied safety equipment at all times, this includes but is not limited to protective eyewear, helmet, high visibility safety vests, etc.
 - dress appropriately for the weather
 - no open toe shoes

- no offensive clothing, e.g., too revealing, offensive graphics or words

Managing Brush

Manage brush so it is safe for citizens and convenient for the city. Keep brush cleared from all sidewalks, out of the street, and at least 10 feet away from any fire hydrant. Maintaining brush in a courteous and safe manner is crucial.

Following a volunteer event, the city will haul the brush away. Make as few piles of brush as possible on each boulevard. For ease of handling brush, stack the brush with the pruned end of the material facing the street.

If brush is too large to fit with the pruned end of the branch out in the boulevard space provided, cut the brush into smaller pieces or, turn the brush pile parallel with the street while keeping the cut ends together.



SCIENCE AND ART OF PRUNING

Tools of the Trade

Types of Tools

Different tools are used for different types of pruning. Tools are usually differentiated by the size of what will be pruned. The bypass pruner and a pruning saw will be available to Citizen Pruner volunteers.

Bypass pruners

Bypass pruners have curved blades that act like a scissor as they overlap. Properly sharpened bypass pruners leave a smooth, well-defined cut and do not crush plant material. Bypass pruners typically have up to a 1-inch diameter cutting capacity.

Handsaw

Pruning saws come in many shapes and sizes. The blade may be curved or straight, and have either fine or coarse teeth. Pruning saws should be used to remove 1-inch to 2-inch diameter branches.

Pole Pruner

Pole pruners are pruning shears with an extended reach. Pole pruners typically have a 1-inch cutting capacity. Pole pruners should only be used to prune branch material that is unreachable with your bypass pruners or handsaw. This will depend on the height of the pruner, but typically should be used to make cuts that are above 5 feet to 6.5 feet above ground.

Tool Cleaning Procedure

Clean tools of all debris and dirt with soap and water after a volunteer shift. Disinfect tools with rubbing alcohol. Dry pruning tools and/or spray the blades with WD-40 before putting them away to prevent rusting. Note: tools need to be cleaned and disinfected before pruning some tree species (See Tree Identification and Pruning Restrictions).



Image: Pole pruner



Image: Bypass pruners



Image: Handsaw

Tree Identification and Pruning Restrictions

Correctly identifying the type of tree about to be pruned is the first crucial step in pruning trees. Different species of trees are susceptible to diseases at different times of year. Pruning trees at the wrong time can lead to infection.

Linden

Lindens, also known as basswoods, are a species that commonly produce sprouts and suckers.

American Basswood

Code: TIAM

Family:
Tiliaceae

Tilia americana



Tilia americana var. boulevard

Photos: Dave Hanson

Leaves: alternate, simple, 4"-8" long, coarsely serrate edges; heart-shaped, unequal base.

Twigs: slender, round 2-scaled, reddish bud. **Fruit:** ¼-¾", round, under leaf like bract, no ridges.

Bark: light gray when young, darkens with age, narrow/shallow flat topped ridges.

Oaks

Pruning oaks at the wrong time of year can lead to infection by oak wilt, which can result in the tree's death. The safe period for pruning oaks is typically November through March.

Visit www.myminnisotawoods.umn.edu/2010/03/oak-wilt-risk-status-in-minnesota for the current oak wilt infestation status.

Swamp White Oak

Code: QUBI

Family: Fagaceae

Quercus bicolor



Photos: Dave Hanson

Leaves: alternate, simple, 4-7" long, 5-12 shallow rounded lobes, shiny green top, whitish below.

Fruit: ¾" to 1¼" paired acorns, 1"-4" stalk. Acorns mature in the autumn.

Bark: light brown, papery, scales become blocky and deeply fissured with age.

Northern Red Oak

Code: QURU

Family: Fagaceae

Quercus rubra



Photos: Dave Hanson

Leaves: alternate, simple, 4-9" long, 7-11 bristle-tipped lobes, sinuses cut ½ way to midrib.

Fruit: ⅝" to 1⅛" acorn, shallow cap, scales pubescent, acorns mature autumn of second season.

Bark: gray to red-brown, smooth, shiny, becoming grayish flat-topped ridges, deeply furrowed.

Bur Oak

Code: QUMA

Family:
Fagaceae

Quercus macrocarpa



Photos: Dave Hanson

Leaves: alternate, simple, 4-12" long, 5-9 rounded lobes, center sinuses cut to mid-rib.

Fruit: acorn, fringed (bur) cap covers $\frac{1}{2}$ or more of $\frac{3}{4}$ " to 2" acorn, acorns attached direct to twig.

Bark: grayish with vertical ridges, deeply furrowed. Bur oak can have corky twigs.

White Oak

Code: QUAL

Family:
Fagaceae

Quercus alba



Photos: Dave Hanson

Leaves: alternate, simple, 4-9" long, 5-9 rounded lobes, sinuses nearly uniform in depth.

Fruit: acorn, $\frac{3}{8}$ " to 1 $\frac{1}{4}$ " acorns, cap covers top $\frac{1}{4}$ - $\frac{1}{3}$, acorn is attached via a $\frac{1}{4}$ " stalk.

Bark: Light ash-gray, narrow vertical ridges, with age breaks into blocky, irregular shapes.

Elms

There are a variety of diseases that can affect elms if pruned at the wrong time of year. Common problems are the formation of cankers and infection by Dutch elm disease. Whenever possible, elms are best pruned during the dormant season (November to March).

Code: ULAM

American Elm

Family: Ulmaceae *Ulmus americana*
a.k.a. white elm



Leaf surface - smooth to slightly rough

Photos: Dave Hanson

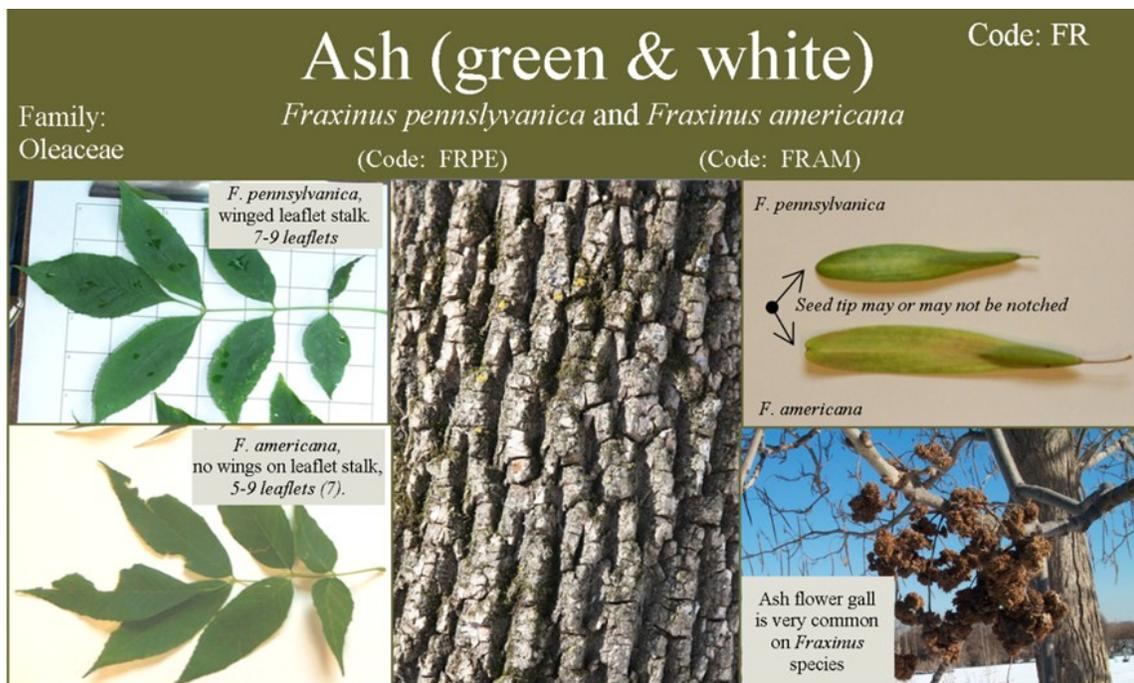
Leaves: alternate, simple, 3-6" long, doubly serrate edges, strongly uneven base, pointed tip.

Fruit: $\frac{3}{8}$ " - $\frac{1}{2}$ ", papery samara, oval wing, deeply notched tip, hairy; **Buds:** pointed, not hairy.

Bark: grayish, with deep furrowed ridges - in cross-section alternating layers of red and white.

Ash

Ash trees shouldn't be pruned during the flight season of emerald ash borer (beginning of May through end of August). Flight seasons can change depending on spring and fall temperatures. Cold springs delay flight season and warm falls extend flight season. Pruning ash trees during the flight season of the adult insect encourages their movement to other healthy trees nearby.



Photos: Dave Hanson

Leaves: opposite, pinnately compound, leaflets have petioles (not sessile as black ash).

Fruit: 1-2" single samara, "wing" stops where seed begins, seed is round in cross-section.

Bark: Gray/brown interlacing ridges form "diamond" patterns. **Twigs:** not as stout as black ash.

Honeylocust

Nectria canker is a disease that spreads when the weather is wet, so pruning Honeylocust in the spring to fall should be avoided. Pruning in the heat of the summer or from the late autumn to late winter is most desirable to avoid spreading diseases. It is also important to thoroughly clean and disinfect tools before pruning a Honeylocust.

Code: GLTR

Honeylocust

Family: *Gleditsia triacanthos*
Caesalpiniaceae Typically sold as variety 'Inermis' (without thorns).



Photos: Dave Hanson

Leaves: alternate, compound pinnately and bipinnately, 15-30 small leaflets.
Twigs: reddish/brown and may have thorns. **Fruit:** 6-18" long, 1" wide, brown twisted pods.
Bark: reddish/brown scaly ridges, a "cracking" appearance - may have sharp, 3-branched thorns.

Nectria Canker

Identifying the Fungus. - The fungus can be identified by the creamy-white fruiting structures that appear on cankers soon after infection. It can also be identified by the pinhead-sized, red, lemon-shaped perithecia near canker margins after 1 year.

Identifying the Injury. - Well-defined localized areas of bark, cambium, and underlying wood are killed by the fungus. Concentric, annual callus ridges develop around the expanding canker, and bark sloughs off the older parts of the canker. After several years, the canker resembles a target.

- *Forest Service*

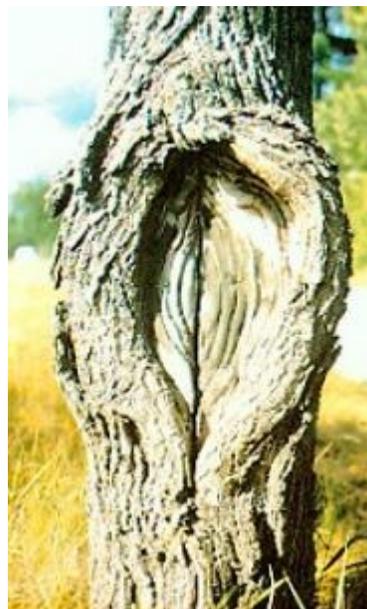


Image: *Nectria canker* injury on walnut



Image: *Nectria canker* spores on Honey Locust

Crabapple and Mountain Ash

These trees are all susceptible to fireblight, which can be spread through pruning wounds during spring and early summer. This means crabapples and mountain ashes should be pruned during the late fall or late winter (October through early April, respectively).

Crabapple

Code: MA2

Family: Rosaceae *Malus spp.*



Photos: Dave Hanson

Leaves: alternate, simple, 1-3" long, elliptical-ovate, finely serrated, showy white to red flowers.

Fruit: small apple or pome (< 2"), variety of colors, some persist into late winter.

Bark: gray/pink thin, scaly/flaky. **Twigs:** moderately thick, foliage/fruit on spur shoots.

Mountain Ash

Code: SO

Family: Rosaceae *Sorbus decora* and *S. americana*
Showy mountain ash and American mountain ash



Photos: Dave Hanson

Leaves: alternate, pinnately compound, 6-10" long, 11-17 sharp, finely-toothed leaflets.

Twigs: twig, stout gray-reddish. **Buds:** dark, pointed, resinous, hairy. **Fruit:** small red-orange "berries" in a cluster. **Bark:** grayish, smooth, lenticels in youth - ages to splitting, peeling, rough.

Types of Removals from Trees

Citizen Pruner volunteers are tasked with removing sprouts, suckers, deadwood, and leftover tree stem protection systems. It's not only important to correctly identify and remove them, but also know why they form and are used.

Tree Stem Protection Systems

Tree stem protection systems are used to protect the tree's stem from physical damage. Weed whips, lawnmowers, animals, and herbicides commonly cause physical damage to tree stems.

Even though the intent of tree stem protection systems is to protect the tree, they can be damaging if secured incorrectly or left on too long. Stem protection applied too tightly or left on too long can compress the stem. This can restrict water and nutrient uptake, and constrain normal flow through the stem.

Stem protection systems should be removed when they are tight to the stem. When removing any stem protection systems, keep them separate from the pruning debris.



Mulch Volcanoes

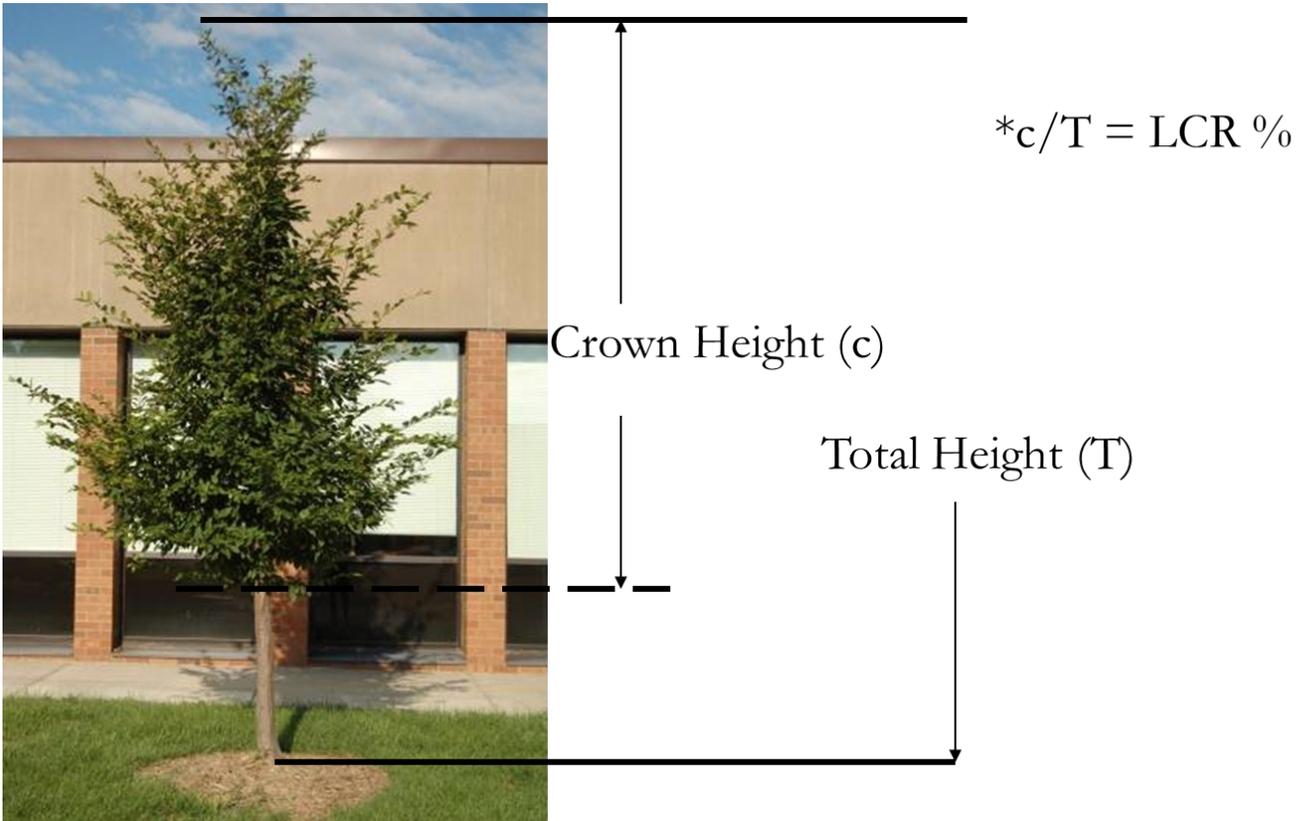
Mulch volcanoes happen when mulch is piled too close to the stem of the tree to the point where it looks like a volcano. This is not healthy for the tree and can create an environment that promotes stem girdling roots, insects, and diseases.

Mulch should be moved away from the stem so that the mulch is no longer touching the stem. Use your hands to move the mulch so that it creates a ring around the stem like doughnut.



Before starting to prune keep these two rules in mind:

1. Always keep a good Live Crown Ratio. This means that for deciduous trees 60% of the tree should contain a living crown, and for coniferous trees this means 75% should be in Live Crown
2. Never remove more than 25% of the trees Live Crown in one pruning season.



Suckers

Suckers are sprouts that develop at the base of the trunk or off the tree's root system. Some tree species such as apples and lindens are naturally prone to suckering; others may form them as a reaction to stress.

Why suckers become a problem:

Suckers become a problem when they block sight lines, sidewalks, and streets.



Image: Sucker on Tilia (Linden)



Image: Sucker on Tilia (Linden) 16

Sprouts

A sprout (or watersprout) is a fast-growing, often very upright branch that emerges from the tree trunk.

Why sprouts become a problem:

Not only can sprouts block site lines, creating safety issues for drivers or pedestrians, they can also be a disadvantage to the tree. Sprouts form weak branch unions because they are more shallowly attached than branches at a normal branch union. Large sprouts have a greater potential to fail because of their weak branch union attachment.



Image: Sprouts on Tilia (Linden)

Included bark

Included bark is when bark grows in between a branch union which prevents the branch from attaching correctly to the trunk or another branch.

Why included bark is a problem:

Since bark is growing between the union, woody material is unable to attach the branch correctly. This creates a weak union which is more likely to fail, causing it to fall.



Image: Included bark on Malus (Apple)

Co-dominant leaders

The term co-dominant leader is used to describe two or more main stems that are about the same diameter and emerge from approximately from the same location on the trunk.

Why co-dominant leaders are a problem:

The closer in size a branch is to the main stem, the more likely it is to fail. Co-dominant leaders are similar in size and competing for dominance, they are all closer in size to the main stem and are thus more likely to fail.

Choosing a leader:

First you must choose which leader to keep. Look for leaders that are central to the stem, and straight in nature. Also be aware of leaders that have the best structure with good branch attachments. Once



Image: Co-dominant leader on Acer (Maple)

you've chosen the leader, you do not need to completely remove all of the competing leaders, but the ones you do not remove you should suppress using a reduction cut (see page 23).

Crossing or rubbing branches

Crossing or rubbing branches occur when two separate branches begin to collide with one another.

Why crossing or rubbing branches are problems:

Crossing or rubbing branches can injure bark and other living tissue on the branch, which makes the branch more prone to decay or disease.

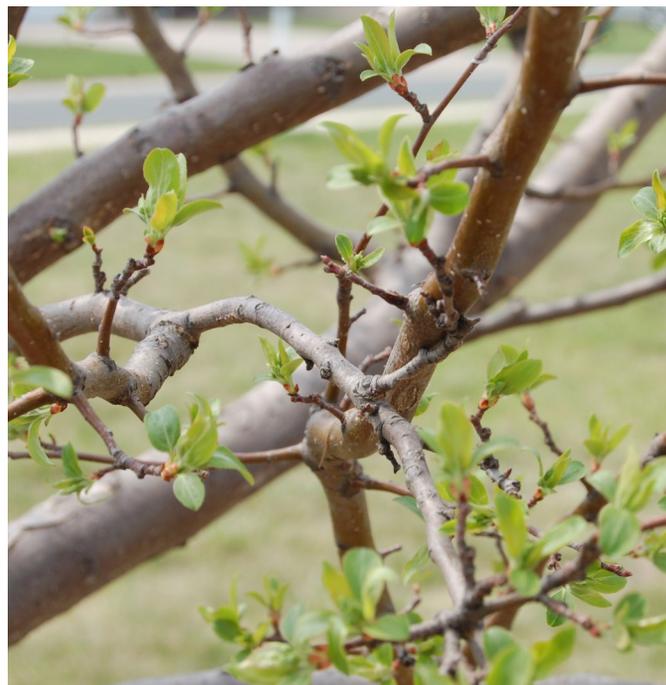


Image: Rubbing branch on Malus (Apple)

Good spacing between branches

The vertical space between branches should eventually be 12 inches for fruit or small stature trees, and 18 inches or more for medium and large stature deciduous trees (this spacing does not apply to coniferous trees).

Why good branch spacing is important:

Good branch spacing is important for future growth of the tree. As branches increase in size, it's more likely they will grow into each other if not properly spaced. Without proper spacing, it's more likely that branches will begin to cross or rub.



Image: Poor spacing on Malus (Apple)

Deadwood

Deadwood occurs for a number of reasons and is easily identified during leaf out. Use either a bypass pruner or pruning saw to remove deadwood at the branch collar. Use the three-cut method if the branch is large.



Before



After

When pruning branches with deadwood and live wood, prune only deadwood and save as much of the live wood as possible. The deadwood on a live branch should always be pruned back to a node.

Temporary branches

Trees grow outwards, not upwards, so branches that you see now will remain at the same height until you or a storm remove them. Trees need to be pruned up to clear space for cars and trucks to drive through. Different streets vary in their requirement of clearance levels, but the average is 14.5 feet in height. Since pruning is wounding, removing, and the larger the branch removed the larger the wound, these branches should be removed as early in the trees life as possible.



Image: Temporary branch on Malus (Apple)

Pruning

How to prune suckers:

Suckers that form below the soils surface should be pruned as close to and as parallel with the ground as possible. Suckers that form on the base of the trunk should be pruned similarly to sprouts.



Prune small suckers growing out of the trunk's base with bypass pruners just outside the branch collar or area of swelling. If the sucker is large and is growing out of the base of the trunk, use the three-cut method to prevent bark ripping. There is no need to use the three cut method on suckers growing out of the ground because there is no risk of bark ripping. Whenever possible, saw away from the trunk to lower the risk of injuring the stem.



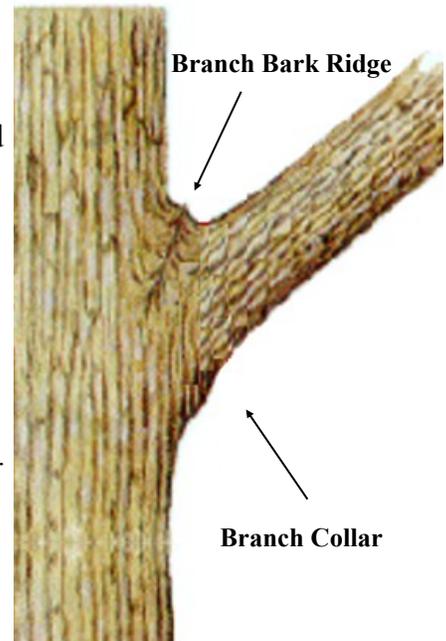
If you come across a pruning cut done improperly and the tree collar has grown along a branch stub, remove only the dead stub that extends beyond the collar.



Pruning branch material

First identify the branch collar, the area of swelling. This may be hard to find with sprouts as they will often swell where there are several small sprouts in one area. The branch collar is more noticeable on a larger branches. Prune sprouts and branches just beyond the branch collar because it makes a smaller, more sealable wound that does not injure the main stems cambium.

Sharp tools make the best pruning cut on a tree. Prune small sprouts and branches with a pruning shear. If the sprout or branch is too large for bypass pruners, use the three-cut method with a pruning saw to prevent bark ripping.



How to prune branch material (sprouts, included bark, etc.) that is less than 1 inch in diameter:

- ◇ Hand support the end of branch away from the tree stem to stabilize the branch as you make your cuts
- ◇ Identify branch collar.
- ◇ Place pruning shears just outside of branch collar with the sharp end of the blade on the underside of the branch material..
- ◇ Apply pressure through squeezing handles. Use rocking motion while still applying pressure with larger branch that does not cut easily right away.
- ◇ Once blades cut all the way through, place branch material in pile facing pruned ends in the same direction.



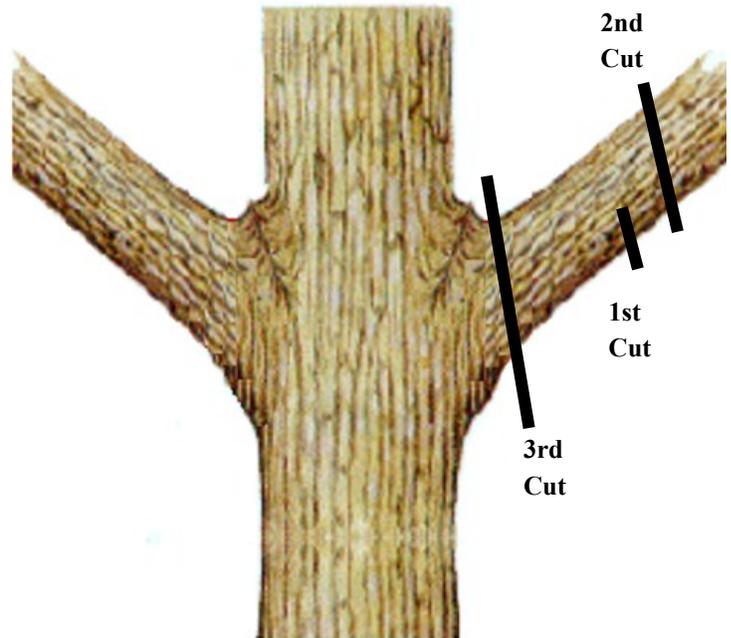
Image: Sprouts on Ulmus (Elm)



Image: Sprouts on Tilia (Linden)

How to prune branch material (sprouts, included bark, etc.) that is 1 to 2 inches in diameter:

- ◇ Hand support the end of branch away from the tree stem to stabilize the branch as you make your cuts.
- ◇ Identify branch collar.
- ◇ Proceed using the Three-cut method.



Three-cut method:

1. With your handsaw make a shallow cut on the underside of the branch 1 or 2 feet out from the branch union.
2. Make a top cut all the way through the branch slightly farther out than the first cut to leave a short stub.
3. Remove the stub by cutting just outside the branch collar.

How to prune branch material (sprouts, included bark, etc.) with a pole pruner:

- ◇ Identify the branch you want to prune, making sure it is not too large for the pole pruner. Do not cut anything too large, as doing so may break the pole pruners.
- ◇ Identify the branch collar.
- ◇ Do not stand directly below the branch that you are cutting. Make sure that you stand off to the side of where you are cutting so the branch doesn't fall on you.
- ◇ Place the branch between each shear of the pole pruner.
- ◇ Make sure that your placement of the shears will make an appropriate cut for the branch.



Image: Pole pruning of a co-dominant leader on Acer (Maple)

- ◇ Pull sliding handle or rope towards you to make the cut.
- ◇ Review the cut made and amend if needed.

Reduction cut

Pruning to a node is used when pruning out deadwood or when making a suppression cut, also known as a reduction cut. A reduction cut shortens the stem back to a lateral branch or to a node. Future growth is forced into the unpruned branches.



Pruning back to a node



INCORRECT
Cut is made too far from bud. Dead stub will remain.



INCORRECT
Cut is made too close to bud. Bud will dry out.



CORRECT
Cut is made just beyond bud and at an angle.

Poor Pruning

Bark ripping can occur when the three-cut method is not used to remove large branches. This often happens when the pruning cut is made by starting the cut on the top side of the branch. The branch fails because it doesn't have enough support, causing the bark at the base of the branch to tear.

Flush cutting occurs when a pruning cut is made close to the stem and removes part of the stem's living tissue. This inhibits the flow of water and nutrients up the stem, and can affect branch development in the canopy and will lead to decay.

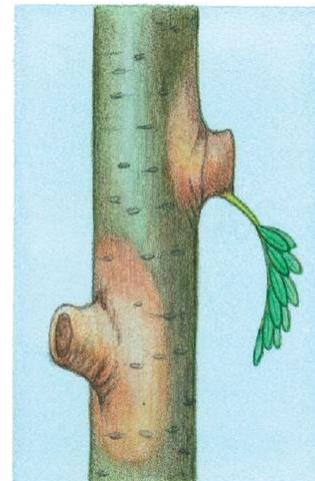
Stub cutting occurs when a branch is pruned too far outside the branch collar. It takes longer for the tree to grow new wood and bark over the wound.



Bark Ripping



Flush Cutting



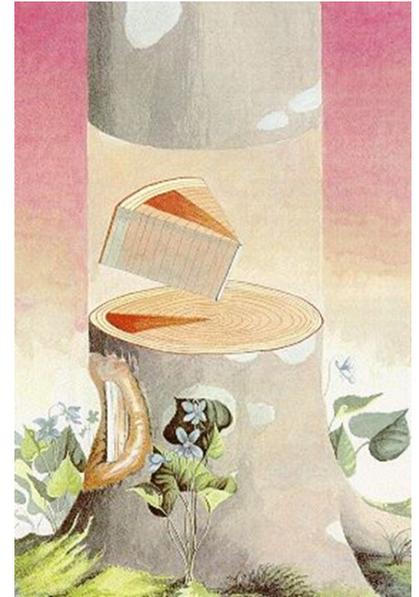
Stub Cutting

Compartmentalization of Decay in Trees

Compartmentalization of Decay in Trees (CODIT) is a complex tree process to prevent the spread of decay and disease. Trees do not heal like humans. Instead of healing an injury, a tree will compartmentalize it. Even though pruning is beneficial to the tree, pruning is still considered an injury.

Compartmentalization is a unique way trees plug up their vascular system to prevent the transport of diseases and decay in the stem. This plugging also prevents the transport of water and nutrients. Some trees species are better at compartmentalizing than others.

Pruning a tree leaves an open wound. If pruned correctly, the wound will compartmentalize and new growth will form over the wound quickly.



Citations

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Appendix A

Citizen Pruner Field Form

Community Name:		Start Time:					
Group Member Names:		End Time:					
Date:							
Tree	Street Address/Area of Park	Species	Enter Number of Each Removal			Check Box	Notes
			Suckers	Sprouts	Deadwood		
1			Inclusion	Co-Dominant	Crossing	Mulch	
			Raising				
Tree	Street Address/Area of Park	Species	Suckers	Sprouts	Deadwood	Tree Wrap	Notes
2			Inclusion	Co-Dominant	Crossing	Mulch	
			Raising				
Tree	Street Address/Area of Park	Species	Suckers	Sprouts	Deadwood	Tree Wrap	Notes
3			Inclusion	Co-Dominant	Crossing	Mulch	
			Raising				
Tree	Street Address/Area of Park	Species	Suckers	Sprouts	Deadwood	Tree Wrap	Notes
4			Inclusion	Co-Dominant	Crossing	Mulch	
			Raising				
Tree	Street Address/Area of Park	Species	Suckers	Sprouts	Deadwood	Tree Wrap	Notes
5			Inclusion	Co-Dominant	Crossing	Mulch	
			Raising				
Height, length and width of brush pile in inches							
1	ft. x	ft. x	ft.	ft. x	ft. x	ft.	3
2	ft. x	ft. x	ft.	ft. x	ft. x	ft.	4
Where was brush piled:							Where was brush piled:

Appendix B

Front

www.mntca.org

- 1530 Cleveland Avenue North -
- 115 Green Hall -

UNIVERSITY OF MINNESOTA
MINNESOTA TREE CARE ADVOCATE

Minnesota Tree Care Advocate

*Promoting healthy urban
forests by fostering
community education to
increase local capacity.*



Fold
here

Back

Education

Understanding the trees in your yard makes you a better caregiver to the urban forest in your neighborhood. Minnesota Tree Care Advocates offer a wide array of classes to help you become a better environmental steward.

Classes include best planting practices, pruning, plant health issues, predicting and preventing storm damage, and plant selection.

Volunteerism

Use the knowledge you gain in our classes to better your community through trees and the urban forest. Volunteer opportunities vary from planting trees to teaching. Connect with others who share your interests while creating a healthier ecosystem in your neighborhood.

Appendix C



The thumbnail shows the cover of the 'Tree Owner's Manual' with the PCA logo at the top, a tree illustration, and the title 'Tree Owner's Manual'.

Tree Owner's Manual

Download your free copy at:
www.treeownersmanual.info

Appendix D

Front



Back

The Community Forestry Outreach Line is a resource maintained by trained volunteers where Minnesota residents can have their tree-related questions answered.

612-624-3020

treeinfo@umn.edu