

**ENVIRONMENTAL COMMISSION**

**Wednesday, February 21, 2024**  
**7:00 p.m. – Council Chambers**

**AGENDA**

1. Call to Order Establish a Quorum
2. Approval of Minutes
  - a. Environmental Commission Minutes of January 23, 2024
3. Public Participation/Presentations
4. Items for Consent
  - a. None
5. Review and Discuss the Commission Priority List
  - a. Current List
    - i. November 24, 2023, to January 19, 2024 – Holiday Lights Recycling Event
      1. 840 Lbs. of lights were recycled.
    - ii. Blooming Fest – May 18, 2024
      1. Online application submitted for the Commission's booth at the event
      2. Bareroot giveaways
        - a. Ongoing coordination with DuPage County
        - b. The County ordered following bareroots from Mason State Tree Nursery Topeka IL County (600 Total)
          - i. Hazelnut- Quantity: 100
          - ii. Bur Oak- Quantity: 100
          - iii. White Pine- Quantity: 100
          - iv. Bald Cypress- Quantity: 100
          - v. Bitternut Hickory- Quantity: 100
          - vi. Black Chokeberry- Quantity: 100
      3. Rain Barrel Program
        - a. Can this program be incorporated into the Blooming Fest? (Motion Required)

- b. Application submitted to set up a webpage for the event.
- c. Proposed Start Date: February 22, 2024
- d. Proposed End Date: May 5, 2024
- 4. Brochures and FAQ sheets for the events (Attached)
- 5. Event coordination (e.g., Education Material, Volunteers, Packaging/Tagging) (Attached)
- 6. National Honors Society volunteers from high school would be interested in service hours.

iii. Paper Recycling Event & Rain Barrel Pick Up – June 1, 2024

- 1. Agreements received and dates are confirmed.

6. New Additions

7. Other Business

- a. Status on the resident survey
- b. Conservation Foundation Presentation Topics (Attached)
  - i. Conservation @ Home
    - 1. <https://theconservationfoundation.org/conservation-home/>
- c. DuPage River Sweep – May 4<sup>th</sup> 2024
  - i. <https://theconservationfoundation.org/rivers-streams/river-sweep/>
  - ii. Is the Commission interested in participating? (Motion Required)
- d. Commission's Recommendations for Waste Contract Due by Friday, March 22, 2024

8. Adjournment



**MEETING MINUTES**  
**ENVIRONMENTAL COMMISSION**

January 23, 2024, 7:00 P.M.

1. Call to Order Establish a Quorum
  - a. *Staff Liaison, Dave Shah, called the meeting to order at 7:02 P.M. Roll call found Chair Nazree Williams, Co-Chair Thomas Cherrington, Commissioner Allen Rodriguez, and Commissioner Tyler Kesler present.*
  - b. *Aldermanic liaison present included Alderman Christopher Swiatek.*
  - c. *Staff liaison present included Assistant Director of Public Works, Dave Shah.*
  - d. *The Commission welcomed Tyler Kesler, who was appointed to the Environmental Commission on January 15, 2024.*
2. Approval of Minutes
  - a. Environmental Commission Minutes of December 13, 2023
    - i. *Cherrington made a motion, seconded by Williams, to approve the Meeting Minutes.*
      1. *Voting Yea: Rodriguez and Kesler*
      2. *Voting Nay: None*
3. Public Participation/Presentations
  - a. *None*
4. Items for Consent
  - a. *None*
5. Review and Discuss the Commission Priority List
  - a. Current List
    - i. *November 24, 2023, to January 19, 2023 – Holiday Lights Recycling Event*  
*Discussion: Shah mentioned that the event ended on January 19, 2023, and the total collection weight will be reported once all bins are collected and weight by Groot.*
  - b. New Additions
    - i. *Blooming Fest – May 18, 2024*  
*Discussion: Cherrington volunteered to lead the coordination effort for this event. Cherrington also discussed the potential for partnership with the school, which included volunteer opportunities for students and to promote native species.*
    - ii. *Paper Recycling Event & Rain Barrel Pick up – June 1, 2024*  
*Discussion: Williams volunteered to lead the coordination effort for this event. The Commission mutually agreed to hold this date for the event.*
6. Other Business
  - a. *Goals for 2024*
  - b. *Status on the resident survey*  
*Discussion: Williams to finalize and follow up with the Commission.*

- c. DuPage County's Environmental Committee tree & shrub bareroot seedling giveaway for 2024 Arbor Day- Blooming Fest Update.  
*Discussion: Shah followed up with the County and was able to confirm from the County's arborist that the bareroots can be planted after May 18, 2024. The Commission generally agreed and advised Shah to move forward with ordering 250 trees and 250 shrub bareroots from the County, which can be handed out during the Blooming Fest event on May 18, 2024.*
- d. Various other items discussed
  - i. Uniforms  
*Discussion: Commissioners were generally interested in acquiring uniforms (e.g., polo with City logo) to represent the City and the Environmental Commission during various events. Shah will follow up on the uniform ordering procedure, including purchasing costs for the voluntary Commissions.*
  - ii. Waste Contract  
*Discussion: The Commission was interested in knowing the City's timeline for the RFP process for the Waste Contract renewal process. Shah to follow up.*

7. Adjournment

- a. *At 8:10 P.M., Rodriguez made a motion to adjourn and Cherrington seconded the motion. The motion was unanimously approved by voice vote.*

Respectfully,

Dave Shah, PE  
Assistant Director of Public Works



## **Conservation@Home Presentations**

Note from the Conservation Foundation: *“Our presentations give an overview of our organization and the Conservation@Home program and then speak specifically to what people can do on their own properties. We allow time for questions and provide a free “How-to” Natural Landscaping Guide for each participant. Our program lasts about an hour, and while we do not request a fee from our host organization, donations are gratefully accepted.”*

### **Presentations:**

- **The Birds and the Bees** - There has been considerable coverage in the news lately about the decrease in pollinators: butterflies, moths, and bees. Birds are also decreasing in numbers and are intrinsically connected to pollinators. Our presentation addresses both insects and birds and what we can do to help them.
- **Using Native Plants for Sustainable & Pretty Gardens** - Come learn how our actions drive many of our environmental problems and what you can do to care for your piece of this earth in a more ethical way using techniques that are right and good for wildlife, the soil, water, and us. Our presentation will show how you can have an attractive landscape as well as providing an enriched habitat for birds, butterflies and other pollinators.
- **Nature Rx** – More and more research is coming out about the benefits to our health from spending time in natural areas. Our presentation gives the health benefit details and what you can do to create a healthy garden for yourself and wildlife.
- **Trees** – Trees, particularly oak trees, are keystone species for our natural areas, providing oxygen and more which improve our health, in addition to supporting many insects and animals and helping to mitigate water issues. [OBJ]
- **Rain Barrels, Rain Gardens, and Water Issues** – Water is one of our most important resources. We explain why we need to think of it as a resource to be conserved rather than a waste product to be removed. We show what a person can do to keep water local and clean as well as solve issues on their property.

**Website:** <https://theconservationfoundation.org/conservation-home/>



# Rain Barrel Frequently Asked Questions

The Conservation Foundation  
105404 Knoch Knolls Rd  
Naperville, IL 60565

630-428-4500  
[theconservationfoundation.org](http://theconservationfoundation.org)

# Rain Barrel Frequently Asked Questions

## What are rain barrels?

A rain barrel is a large container that is used to collect and store rainwater. The rain that falls on your roof is directed into the rain barrel through your downspout. Rain barrels are a simple, efficient, low-cost method for homeowners to conserve water.

## Why should I collect rain?

When we think of rain as a precious fresh water resource, it doesn't make sense to manage it like a waste product. Capturing rainwater in a rain barrel gives us clean water to offset our household water usage.

Collecting rain instead of letting it flow off our property as stormwater runoff helps to reduce local flooding and stress on storm sewer infrastructure. Since stormwater runoff picks up pollutants as it flows over the landscape before ending up in local waterways, reducing stormwater runoff also protects local rivers and streams.



## How do I use the water that I've collected in my rain barrel?

Use the water in your rain barrel between storms. Water collected in rain barrels is great for watering lawns, gardens and houseplants. You can also use the water to wash your windows, cars or pets! To use, attach a hose to the bottom valve and direct to landscaping, or simply fill buckets or watering cans.

Even if you don't have an intended use for the water, emptying the rain barrel after a storm reduces the rate and volume of stormwater the storm sewer system and our rivers have to manage at a peak time.

## Can rain barrels reduce flooding in my neighborhood?

Each and every rain barrel contributes to reducing stormwater runoff in your community. When we collect stormwater in rain barrels and use it at a later time when your lawn is not saturated with stormwater, more water stays on your property. This means there is less stormwater runoff to strain storm sewer infrastructure and overwhelm local rivers and streams, resulting in less flooding in your neighborhood.

## Where can I buy a rain barrel?

The Conservation Foundation sells rain barrels year-round through a partnership with Upcycle Products, Inc. The 55-gallon rain barrels are made of recycled food-grade plastic, come in a variety of colors and can be purchased online for \$60 (plus tax). Home delivery is available for \$5 more. Barrels can also be purchased in person at The Conservation Foundation's headquarters at McDonald Farm or area events for \$65 (includes tax).

Buy a rain barrel online at [www.theconservationfoundation.org/conservation-home/rain-barrels](http://www.theconservationfoundation.org/conservation-home/rain-barrels). Rain barrel accessories, such as a wood pedestal and flex elbow, are also available for purchase.

Several communities have also partnered with The Conservation Foundation and Upcycle Products to sell rain barrels to their residents. Check your community's website to see if they have a rain barrel program.

Purchase a rain barrel at  
[www.theconservationfoundation.org/conservation-home/rain-barrels](http://www.theconservationfoundation.org/conservation-home/rain-barrels)

# Rain Barrel Frequently Asked Questions

## What material is the rain barrel made out of?

The Conservation Foundation's rain barrels are made of food-grade recycled plastic. The rain barrels are made from containers once used to ship bulk food, such as olives.

The rain barrels are 55-gallon containers, stand about 4 feet tall and weigh 400 pounds when full of water.

## How do I install a rain barrel?

Rain barrels work best when placed on a stand or concrete blocks under a downspout. The added height increases water pressure and provides space for a bucket or watering can to be placed under the valve.

Once the rain barrel is positioned on the platform, measure and cut the downspout to a length just above the top of a barrel. Downspouts can be cut with a hacksaw. Save the cut-off for reattachment in the winter.

Attach two elbows or a flex-elbow connector (available at most hardware stores or on the rain barrel online order website) to the downspout to direct water to the top of the barrel. There are two sizes of flex-elbows (2x3" and 3x4"), so measure your downspout before buying.

For a visual, you can find an installation guide and video at [www.theconservationfoundation.org/conservation-home/rain-barrels/](http://www.theconservationfoundation.org/conservation-home/rain-barrels/)

## Can I leave my rain barrel out during the winter?

If the barrel fills with water and freezes, it may crack. In the fall, we recommend you empty the rain barrel, properly store it outside or bring it inside, and replace the downspout. If you'd like to leave the barrel outside, turn it upside-down and weigh it down.

## Do rain barrels attract mosquitos?

Any standing water is attractive to mosquitos. Fortunately, the rain barrels have screw-off lids with a screen to keep debris and insects from the water—including mosquitos!

## What happens if I forget to use the water or empty the rain barrel between storms?

We encourage you to use the clean rainwater as a resource to offset your household water use! However, you can attach a garden hose to the overflow fitting on the top part of the barrel. When the barrel fills up, additional water will be directed away from the foundation of your house and keep the water level below the screening to prevent mosquitos. You can also attach a diverter to the downspout which allows rainwater to continue out the downspout when the barrel is full.

## What else can I do to manage stormwater on my property?

Add native plants to your landscape! Native plants have deep root systems that help infiltrate rainwater into the soil. Native plants not only reduce stormwater runoff, but also create beautiful gardens and provide habitat for birds, butterflies and beneficial insects.

Rain gardens also help manage stormwater at home. Rain gardens are shallow depressions (or low areas on your property) planted with deep-rooted native plants accustomed to wet conditions. Create a rain garden and direct water from the downspout or sump pump into it. Find more information about rain gardens at [www.theconservationfoundation.org/conservation-home/creating-native-gardens/](http://www.theconservationfoundation.org/conservation-home/creating-native-gardens/)

You may also consider permeable pavers for your driveway or patio. These pavers reduce runoff at the source by allowing water to seep into the ground around the pavers. They also improve water quality by filtering out pollutants as stormwater flows through the rock layers installed below the pavers.



Purchase a rain barrel at [www.theconservationfoundation.org/conservation-home/rain-barrels](http://www.theconservationfoundation.org/conservation-home/rain-barrels)



## Painting Your Rain Barrel

To paint a rain barrel a solid color, Krylon's Fusion spray paints are recommended as they are designed for plastic and do not require a primer.

You can also try a fun design! Make decorating your rain barrel a family or group project.

1. Prime the barrel with Zinser 1-2-3 (blue can).
2. Follow with a coat of interior/ exterior grade acrylic paint.
3. Paint your designs with acrylics.
4. Display proudly and share your idea with neighbors and friends.



This water-saving work of art was painted by artist Peter Thaddeus.



Rain barrels are just one element of The Conservation Foundation's Conservation@Home education and recognition program for homeowners. If you are incorporating native plants and water conservation features like rain barrels in your home landscape, you should be recognized for your efforts with Conservation@Home certification! Criteria for certification includes:

- Landscaping featuring native plants.
- Creation and protection of natural areas with steps taken to control invasive plant species.
- Efforts to reduce erosion and conserve rainwater on property.

## How do I get my rain barrel?

### Online or In Person

Order online at

[www.theconservationfoundation.org/rainbarrels](http://www.theconservationfoundation.org/rainbarrels)



**Pick up at the  
McDonald Farm**

10S404 Knoch Knolls  
Naperville, IL 60565



**Pay for Home  
Delivery**

or

Purchase a rain barrel in person by visiting McDonald Farm (address above) on Thursdays from 1-5pm April through September.

View current pricing at

[www.theconservationfoundation.org/rainbarrels](http://www.theconservationfoundation.org/rainbarrels)

Questions? Call 630-428-4500, Ext. 132

### About The Conservation Foundation

The Conservation Foundation is a nonprofit land and watershed protection organization dedicated to preserving open space and natural lands, protecting rivers and watersheds, and promoting stewardship of the environment in northeastern Illinois. Established in 1972 by business and community leaders, we work closely with citizens, elected officials, developers, land use planners, and park districts and forest preserves. The Conservation Foundation has helped protect more than 35,000 acres of open space.

[www.theconservationfoundation.org](http://www.theconservationfoundation.org)



## Rain Barrels



A low-tech way  
to conserve water  
and save money!

**The Conservation Foundation**  
10S404 Knoch Knolls Road  
Naperville, IL 60565

630-428-4500  
[www.theconservationfoundation.org](http://www.theconservationfoundation.org)

# What are rain barrels?

A rain barrel is used to collect and store rainwater runoff, typically from rooftops. Instead of running down driveways and sidewalks to sewers, rainwater is collected into a rain barrel where it can be stored for use in rain gardens, watering house plants, pet care, and washing cars. Rain barrels are a simple, efficient, low-cost method for homeowners to conserve water.



## Why get a rain barrel?

It is estimated that during the hot summer months, the average homeowner uses 40% of household water in the yard. The chlorine-free rain that falls on roofs can be used to offset household water usage and reduce water bills.

A quarter-inch of rain falling on the average roof yields more than 200 gallons of water. In the Chicago area, the average annual rainfall is more than 30", meaning every household could collect 24,000 gallons of water a year in rain barrels!

Conserving the rain that falls on our properties helps recharge our water supply and assists with flood control by reducing the stress on our rivers and streams.

Collecting rainwater where it falls reduces the negative impacts of having it run down driveways and lawns, where it picks up pollutants like motor oil and pesticides and carries them into our rivers and streams.

# What's special about our rain barrels?

- Made of food-grade upcycled plastic containers which can be painted. Available in a variety of colors.
- Sealed to keep them safe around children and animals.
- Screw-off lid is equipped with a screen to keep debris and insects from the water.
- 55-gallon containers stand about 40" high, 24" wide and weigh 400 pounds when full of water.
- A valve on the bottom of the barrels to which a hose can be attached makes the captured rainwater available through a simple gravity system.
- A separate, capped opening at the bottom can be used with a hose to connect to a second barrel.
- A capped opening at the top can be used with a hose to direct overflow away from your home's foundation.



# How to Install and Use Your Rain Barrel

Rain barrels work best when placed on a stand or concrete blocks under a downspout. The added height increases water pressure and provides space for a watering can to be placed under the spigot. Wooden stands are available on our website or at McDonald Farm.

- 1 Once the barrel is positioned on the platform, measure and cut the downspout to a length just above the top of the barrel. Downspouts can be cut with a hacksaw. Save the cut-off for reattachment in the winter.
- 2 Attach a 2"x3" or 3"x4" flex-elbow connector (available at hardware stores/home centers and on our website) to the downspout to direct water to the top of the barrel.
- 3 To use, attach a hose to the bottom valve and direct to landscaping, or simply fill buckets or watering cans to wash vehicles or water plants.

The ideal time to install rain barrels is when the rainy season begins in the spring. In the fall, empty the barrel and store it upside-down, then replace the downspout.



A spigot at the bottom of barrels allows for easy access to your water.

Partial funding to implement this program in DuPage County is provided by DuPage County Stormwater Management.







**Bald Cypress**  
*Taxodium distichum*

**Large Tree**

Height 50'-70'  
Width 20'-30'

**Soil:**

Acidic, wet soils. Will tolerate dry sites and clay soil.

**Ornamental Value:**

Beautiful yellow/red fall color, **needles are deciduous and will drop each fall.**

Avoid planting near utility lines.

Full sun: Part sun:

**Plant Immediately**

Keep roots moist until planting. Soak roots in water for 1- 3 hrs (not overnight) prior to planting.



**Bald Cypress**  
*Taxodium distichum*

**Large Tree**

Height 50'-70'  
Width 20'-30'

**Soil:**

Acidic, wet soils. Will tolerate dry sites and clay soil.

**Ornamental Value:**

Beautiful yellow/red fall color, **needles are deciduous and will drop each fall.**

Avoid planting near utility lines.

Full sun: Part sun:

**Plant Immediately**

Keep roots moist until planting. Soak roots in water for 1- 3 hrs (not overnight) prior to planting.



**Bald Cypress**  
*Taxodium distichum*

**Large Tree**

Height 50'-70'  
Width 20'-30'

**Soil:**

Acidic, wet soils. Will tolerate dry sites and clay soil.

**Ornamental Value:**

Beautiful yellow/red fall color, **needles are deciduous and will drop each fall.**

Avoid planting near utility lines.

Full sun: Part sun:

**Plant Immediately**

Keep roots moist until planting. Soak roots in water for 1- 3 hrs (not overnight) prior to planting.



**Bald Cypress**  
*Taxodium distichum*

**Large Tree**

Height 50'-70'  
Width 20'-30'

**Soil:**

Acidic, wet soils. Will tolerate dry sites and clay soil.

**Ornamental Value:**

Beautiful yellow/red fall color, **needles are deciduous and will drop each fall.**

Avoid planting near utility lines.

Full sun: Part sun:

**Plant Immediately**

Keep roots moist until planting. Soak roots in water for 1- 3 hrs (not overnight) prior to planting.



**Bald Cypress**  
*Taxodium distichum*

**Large Tree**

Height 50'-70'  
Width 20'-30'

**Soil:**

Acidic, wet soils. Will tolerate dry sites and clay soil.

**Ornamental Value:**

Beautiful yellow/red fall color, **needles are deciduous and will drop each fall.**

Avoid planting near utility lines.

Full sun: Part sun:

**Plant Immediately**

Keep roots moist until planting. Soak roots in water for 1- 3 hrs (not overnight) prior to planting.



**Bald Cypress**  
*Taxodium distichum*

**Large Tree**

Height 50'-70'  
Width 20'-30'

**Soil:**

Acidic, wet soils. Will tolerate dry sites and clay soil.

**Ornamental Value:**

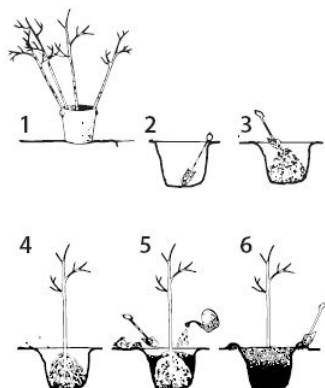
Beautiful yellow/red fall color, **needles are deciduous and will drop each fall.**

Avoid planting near utility lines.

Full sun: Part sun:

**Plant Immediately**

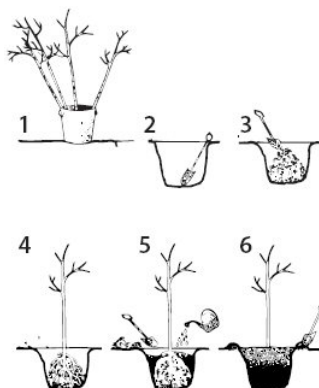
Keep roots moist until planting. Soak roots in water for 1- 3 hrs (not overnight) prior to planting.



1. Keep roots moist while digging hole.
2. Dig a wide planting hole, 2-3x wide as deep.
3. Loosen soil on sides of hole and create a mound of soil at base of hole.
4. Place tree into hole with soil mound supporting tree roots. Top root should be just under the soil surface.
5. Partially fill hole, patting soil down. Water thoroughly and let soil settle.
6. Readjust tree height and position; shovel in remaining soil.

#### Care Tips

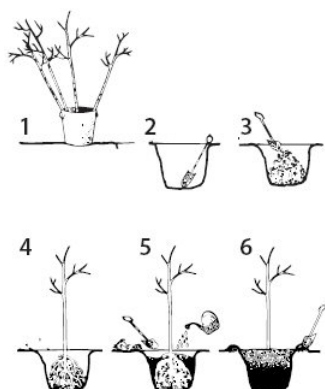
Water the tree to ensure the soil is moist but not soggy.  
Mulch around tree but avoid placing mulch directly next to tree trunk.  
Do not use fertilizer on newly planted tree.



1. Keep roots moist while digging hole.
2. Dig a wide planting hole, 2-3x wide as deep.
3. Loosen soil on sides of hole and create a mound of soil at base of hole.
4. Place tree into hole with soil mound supporting tree roots. Top root should be just under the soil surface.
5. Partially fill hole, patting soil down. Water thoroughly and let soil settle.
6. Readjust tree height and position; shovel in remaining soil.

#### Care Tips

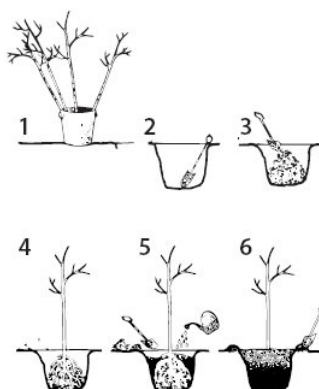
Water the tree to ensure the soil is moist but not soggy.  
Mulch around tree but avoid placing mulch directly next to tree trunk.  
Do not use fertilizer on newly planted tree.



1. Keep roots moist while digging hole.
2. Dig a wide planting hole, 2-3x wide as deep.
3. Loosen soil on sides of hole and create a mound of soil at base of hole.
4. Place tree into hole with soil mound supporting tree roots. Top root should be just under the soil surface.
5. Partially fill hole, patting soil down. Water thoroughly and let soil settle.
6. Readjust tree height and position; shovel in remaining soil.

#### Care Tips

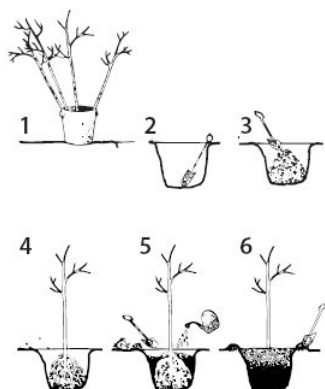
Water the tree to ensure the soil is moist but not soggy.  
Mulch around tree but avoid placing mulch directly next to tree trunk.  
Do not use fertilizer on newly planted tree.



1. Keep roots moist while digging hole.
2. Dig a wide planting hole, 2-3x wide as deep.
3. Loosen soil on sides of hole and create a mound of soil at base of hole.
4. Place tree into hole with soil mound supporting tree roots. Top root should be just under the soil surface.
5. Partially fill hole, patting soil down. Water thoroughly and let soil settle.
6. Readjust tree height and position; shovel in remaining soil.

#### Care Tips

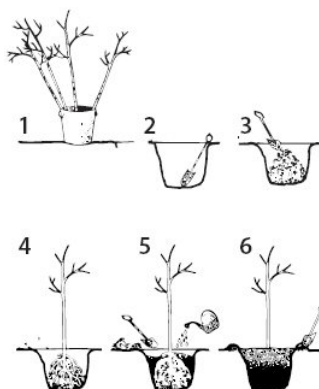
Water the tree to ensure the soil is moist but not soggy.  
Mulch around tree but avoid placing mulch directly next to tree trunk.  
Do not use fertilizer on newly planted tree.



1. Keep roots moist while digging hole.
2. Dig a wide planting hole, 2-3x wide as deep.
3. Loosen soil on sides of hole and create a mound of soil at base of hole.
4. Place tree into hole with soil mound supporting tree roots. Top root should be just under the soil surface.
5. Partially fill hole, patting soil down. Water thoroughly and let soil settle.
6. Readjust tree height and position; shovel in remaining soil.

#### Care Tips

Water the tree to ensure the soil is moist but not soggy.  
Mulch around tree but avoid placing mulch directly next to tree trunk.  
Do not use fertilizer on newly planted tree.



1. Keep roots moist while digging hole.
2. Dig a wide planting hole, 2-3x wide as deep.
3. Loosen soil on sides of hole and create a mound of soil at base of hole.
4. Place tree into hole with soil mound supporting tree roots. Top root should be just under the soil surface.
5. Partially fill hole, patting soil down. Water thoroughly and let soil settle.
6. Readjust tree height and position; shovel in remaining soil.

#### Care Tips

Water the tree to ensure the soil is moist but not soggy.  
Mulch around tree but avoid placing mulch directly next to tree trunk.  
Do not use fertilizer on newly planted tree.



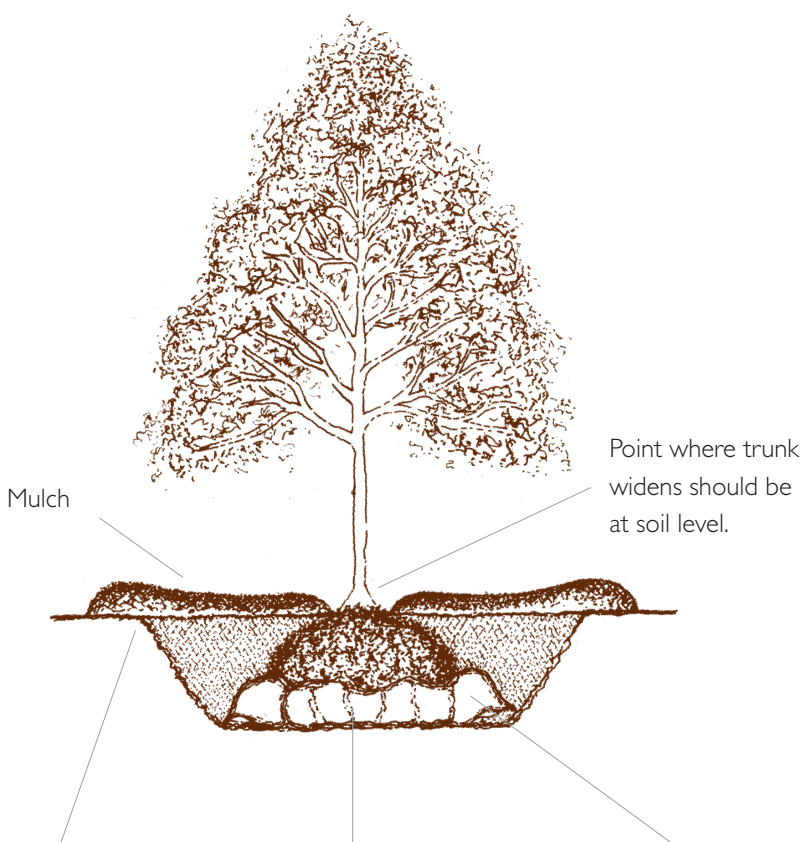
# PLANTING TREES

Plant a tree the right way so it has the best chance to thrive and will provide greater benefits throughout its life. Follow these tips to give your tree a good start. For more information and help selecting the right kind of tree, see [mortonarb.org/plantadvice](http://mortonarb.org/plantadvice).

Trees are measured by the caliper inch, meaning the diameter of the trunk in inches.

## A wide hole, not too deep

A tree needs a wide, shallow planting hole so it can spread out new roots. Trees that are balled and burlapped lose between 70 and 90 percent of their root mass when they are dug up for transplanting.



Dig the hole no deeper than the root ball and 2 to 3 times as wide. Wider is better.

When the tree is in the hole, remove as much wire or rope as you can reach.

Tuck the top  $\frac{1}{3}$  to  $\frac{1}{2}$  of the burlap down around the sides of the root ball. Fill in around root ball with soil that was removed.

## Ways to buy trees

Trees from nurseries come one of three ways: bare root, balled and burlapped (B&B), or potted (containerized).



Bare root    Balled & burlapped (B&B)    Potted

**Bare root trees** have exposed roots without any soil on them. The roots must be kept moist and covered because they can dry out quickly. Bare root trees are usually small—less than 2-inch caliper—and should be planted when dormant (late fall or early spring).

**Balled and burlapped trees** are dug up with some roots in a ball of soil that is then wrapped in burlap. The soil helps keep the roots moist.

**Potted trees** are becoming widely available. They can become rootbound, so remove the pot and carefully unwrap or even cut back circling roots when planting.

# MULCHING

A layer of mulch over its roots helps any tree grow and thrive. It is especially important for newly planted trees, but mulch is good for established trees, too. For more information, see [mortonarb.org/plantadvice](http://mortonarb.org/plantadvice).

A young tree that is mulched may grow twice as fast because it is better able to develop roots.

Mulch helps keep tree roots cool in the summer and holds moisture in the soil. It keeps lawn mowers and string trimmers safely away so they do not damage the tree's bark. Mulch also deters weeds and improves the soil as it breaks down.

Mulch should be made of plant material that will decompose over time.

The best material is chipped or shredded wood, although leaves and grass clippings can be used. Compost also makes a fine mulch. Do not use gravel or stone.

Spread mulch in a wide saucer shape around the tree's trunk.

Mulching imitates the way trees grow in nature. In the wild, the forest floor is covered with a layer of twigs, decomposing leaves, branches, and other dead plant matter.

In urban areas, trees do not have this natural mulch layer and often have to compete with turfgrass for nutrients and water. Replacing grass with mulch protects trees and helps them grow.

Maintaining a mulch layer over a tree's root zone is one of the most important and effective ways to help trees live long, healthy lives.

## The right way to mulch

- Spread as wide as possible
- 3 to 4 inches deep
- Saucer shape
- Keep clear of tree's bark



Spread mulch 3 to 4 inches deep in a wide circle around the tree trunk. Ideally, mulch should cover the whole area under the tree's branches. For newly planted trees, make the circle at least 4 to 6 feet across.

Form the mulch into a low saucer shape a little higher at the outer edge. This will contain rainwater so it can soak down to tree roots.

Make sure the mulch does not touch the tree's bark.

If there is a lawn under the tree, spread mulch right on top of it rather than digging out the grass. The grass beneath the mulch will die, which is better for the tree.

## Avoid these mistakes

- Don't mound mulch against trunk
- Don't let mulch touch bark
- Don't use synthetic materials, gravel, or stone



Never pile mulch against the trunk of a tree. It can trap moisture and cause the bark to rot, making the tree vulnerable to disease and insect problems.

Synthetic materials, gravel, and stone are not good insulators and do not break down to improve the soil.

Most tree roots are just below the soil surface. Typically, 90 percent are no deeper than 18 inches.

# COMMON DISEASES

Not all diseases are destructive to trees. Nondestructive diseases are often called nuisance diseases, as they typically only impact the tree aesthetically. Below are some common examples. Please contact The Morton Arboretum's Plant Clinic ([mortonarb.org/plantadvice](http://mortonarb.org/plantadvice)) before considering treatment.

## Apple Scab

Apple scab is caused by a fungus in spring as new leaf growth emerges. It can mostly be observed on leaves, blossoms, and fruit. Symptoms look like small velvety brown to olive green spots that enlarge and darken to become somewhat circular. Severely infected leaves and fruit fall prematurely. The fungus overwinters on fallen leaves. It is important to rake up leaves and dispose of them off the property.

## Cedar-Apple Rust

Cedar-apple rust is caused by a fungus that needs two hosts: a juniper, such as eastern red-cedar; and, a deciduous host such as crabapple, hawthorn, or quince. On the apple tree, symptoms include leaf spots on the upper and lower side of the leaves and infections on fruits and branches. Symptoms of infection on the junipers are noticeable tan-brown galls that produce bright orange tendrils in the spring. Repeated infestations can destroy the ornamental value of healthy trees.

## Sycamore Anthracnose

Anthracnose is caused by several species of fungi whose spores infect newly emerging leaves. The disease can become severe when cool, wet spring weather persists. The trees most likely to be affected are quite common, such as ash, elm, hickory, maple, oak, sycamore, and walnut. Most anthracnose symptoms are seen on the lower two-thirds of the tree's canopy, while the upper third looks unaffected. Sycamore anthracnose, unlike other anthracnose diseases, can also infect twigs and branches and kill buds, resulting in clusters of growth called witch's brooms. In bad years, sycamore anthracnose can cause trees to lose all their leaves by June. The trees grow new leaves in early July, but the production of new leaves can weaken them. Remove diseased leaves as soon as they drop off.

## Phomopsis Blight

Phomopsis tip blight is a fungal disease that mostly affects evergreens, including junipers, arborvitae, and some pines. Symptoms are first noticeable in spring when new growth changes from light yellow green to red brown to ash gray as it dies. Small stems are usually girdled by these lesions, causing tip death. The blight is spread by splashing rain, wind, insects, or mechanical means such as pruners that have not been disinfected. Prune out diseased branch tips during dry summer weather and discard.



Apple Scab



Cedar-Apple Rust



Sycamore Anthracnose



Phomopsis Blight



# NONTHREATENING INSECTS

Some insects will not typically cause trees to die, but tend to greatly affect tree aesthetics. Below are common, nonthreatening insects found in the Chicago region. Before considering treatment, please contact The Morton Arboretum's Plant Clinic ([mortonarb.org/plantadvice](http://mortonarb.org/plantadvice)) for more information and complete descriptions of these insects.

## Scales

There are many species of scale insects that feed on a wide range of host plants. Scale insects generally feed on plant sap and some species produce a sticky substance often called honeydew that drips onto branches and foliage below. Heavy infestations can cause branch dieback. Different scale insects require different treatments.

## Japanese Beetles

Common in the Chicago region, Japanese beetles are 1/2 inch long, shiny, and metallic green with coppery-brown wing covers. As grubs, Japanese beetle larvae overwinter in the soil and can damage lawns by feeding on grass roots. Adult beetles emerge from the soil in late June and feed until mid-August on leaves of 300 different plant species. Feeding can skeletonize leaves so only the leaf veins remain. Several years of high beetle populations can drastically reduce the vigor of affected trees and plants.

## Caterpillars

Two common pests of deciduous trees are the Eastern tent caterpillar (active in spring) and the fall webworm (active in summer and fall), whose gauzy tents deface trees on roadsides, home landscapes, and orchards. Tent caterpillars feed on leaves of ornamental trees during the day and return to their nests at night. They can defoliate a tree, but the tree may send out new leaves later in the season. Fall webworm stays in the nest all

the time. Its damage is mostly a cosmetic problem. The tentlike structures from both caterpillars can be removed by hand.

## Gall-forming Insects

Galls are abnormal growths that occur on leaves, twigs, roots, or flowers of many plants. While most galls are caused by irritation and/or stimulation of plant cells due to feeding or egg-laying by insects such as aphids, midges, wasps, or mites, some are the result of infections by bacteria, fungi, or nematodes. Most galls are nonthreatening, causing only unsightly distortion on affected plant tissue, though stem galls can do damage.

## Pine Sawflies

There are more than 100 species of sawflies known in the United States. The pine sawfly gets its name from the sawlike apparatus at the tip of the adult's abdomen used for egg laying. Pine sawfly larvae feed in groups on white pine, mugo, and other pines. Due to their vigorous and lengthy feeding periods, large populations of sawflies can cause significant defoliation to host plants. Control requires constant vigilance and immediate action when populations are detected. Remove the larvae by hand or use a forceful spray of water to dislodge them.



Scales



Japanese Beetles



Caterpillars



Gall-forming Insects



Pine Sawflies

# THREATENING INSECTS

Below are the most common destructive insects in the Chicago region. If untreated, they can kill trees, though sometimes the insects are so harmful that treatment is futile. Before considering treatment, please contact The Morton Arboretum's Plant Clinic ([mortonarb.org/plantadvice](http://mortonarb.org/plantadvice)) for more information and complete descriptions of these insects.

## **Emerald Ash Borer**

The emerald ash borer (EAB) is a major invasive species. Adults are metallic emerald green, bullet-shaped beetles that are smaller than a penny. Established across most of the United States, EAB causes significant mortality to native ash trees (*Fraxinus*) during its larval stage. The larvae feed on water-conducting tree tissue just under the bark, creating distinctive serpentine tunnels. As the larvae rapidly multiply, these tunnels girdle a tree in one to three years. Chemical injections can be used to protect trees from EAB larvae if applied before significant damage is done.

## **Two-Lined Chestnut Borer**

Two-lined chestnut borer attacks many types of oaks. Trees that are stressed, injured, or weakened are most susceptible. The adult beetle is slender, greenish-black, and bullet-shaped with two yellow stripes along its back. The larvae feed under the bark and destroy the water-conducting tissues, causing branch dieback and eventually killing the tree. Prevention is the best defense. Healthy trees are less susceptible.

## **Zimmerman Pine Moth**

The Zimmerman pine moth generally attacks Douglas-fir and Scots, Austrian and red pines. The pine moth's larval stage does the most damage. The larvae tunnel under the bark, girdling the trunk or large branches and cutting off the supply of water and nutrients. Masses of sap are apparent on the affected areas of the tree, usually near branch whorls.

Adults are nocturnal gray-brown moths and are rarely seen.

## **Bronze Birch Borer**

Similar to emerald ash borer in shape and size, this metallic bronze beetle affects stressed birches of several species. In the larval stage, the borer tunnels beneath the bark, cutting off the supply of water and nutrients. Some birch species are resistant to bronze birch borer.

National Invasive Species of Critical Concern.

## **Gypsy Moth**

Gypsy moth is a major invasive species. Its caterpillars feed on more than 450 kinds of trees but favor oaks. Found throughout northeastern Illinois, the caterpillars hatch in spring from buff-colored egg masses and begin feeding in groups. The adult male moth is brown and the female is white with black markings. To help slow the spread of gypsy moth, check for egg masses on outdoor surfaces during the winter and remove them.

## **Asian Longhorned Beetle**

One of the most serious invasive pests, the Asian longhorned beetle (ALB) is black with several white spots on its back. It feeds on more than 14 tree species, especially maples. The beetle is most destructive in its larval stage. The larvae tunnel not only in the water- and nutrient-carrying tissues of a tree but also in the inner heartwood, undermining the tree's structure. Although eradicated in the Chicago region, ALB persists in large sections of the eastern United States.



Emerald Ash Borer



Two-Lined Chestnut Borer



Zimmerman Pine Moth



Bronze Birch Borer



Gypsy Moth



Asian Longhorned Beetle



# THREATENING DISEASES

Below are the most common destructive tree diseases in the Chicago region. If untreated, they can kill trees, though sometimes the diseases are so harmful that treatment may be futile. Before considering treatment, please contact The Morton Arboretum's Plant Clinic ([mortonarb.org/plantadvice](http://mortonarb.org/plantadvice)) for more information and complete descriptions of these diseases.

## Dutch Elm Disease (DED)

Caused by a fungus, this disease can spread readily in elm-rich areas due to the fungus' ability to move not only with the help of elm bark beetles, but also through grafted elm root tissue. The fungus spreads quickly throughout the tree. The most obvious sign is late summer "flagging," when leaves on upper branches curl and turn gray-green, then yellow, then brown. Brown streaks in the wood beneath the bark are further evidence, but only laboratory identification can confirm that the tree has DED.

## Oak Wilt

All oaks are susceptible to oak wilt. However, the red oak subgenus is more susceptible than the white oak subgenus. The fungus invades the water-conducting tissues, preventing the normal flow of water. This causes the foliage to wilt and often kills the tree. Oak wilt can spread from infected trees to healthy ones through root grafts or when insects carry spores from one tree to another. The symptoms often start at the top of the tree and gradually spread downward. The leaves on infected branches curl and turn yellow or bronze in color. Red oaks may decline and die within weeks or months, while white oaks may show branch dieback for years before dying. In some cases, white and bur oaks recover after one year of infection.

## Cankers

Cankers vary in size and shape. They appear as sunken or discolored lesions on the bark of trunks and branches or as injured areas on smaller twigs. The bark often splits between diseased and healthy tissue. New leaves on affected branches will become smaller, discolored, and curled. Cankers can take months or years to girdle twigs, branches, or trunks.

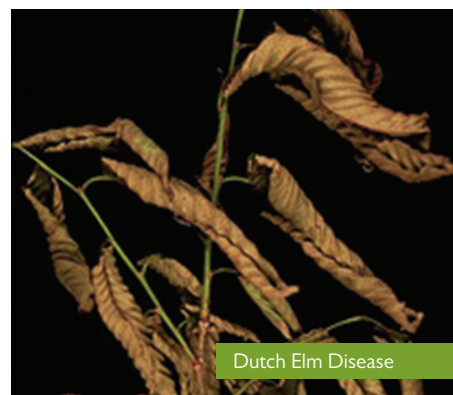
**Thyronectria Canker** is most often found on honey-locust trees.

**Botryosphaeria Canker** is found on many trees including crabapple, elm, linden, pine, and sycamore.

**Cytospora Canker** is found on spruce branches.

## Thousand Canker Disease

A native fungal disease carried and transferred by a twig beetle, thousand canker disease is spreading across the United States, though it is not currently found in Illinois. Host species include walnut and butternut. Symptoms include flagging or wilting from the top of the tree downward and dead branches. Telltale cankers are present under the bark on infected branches.



Dutch Elm Disease



Oak Wilt



Cankers



Thousand Canker Disease

# THREATENING DISEASES

## Bur Oak Blight

Bur oak blight is a fungal leaf disease that has been found in southern Minnesota, Iowa, and northern Illinois. There are two stages of infection: tissue death of the leaf and spore-producing pustules found where the leaf attaches to the twig. Infected leaves generally remain attached to the twigs over the winter and symptoms appear to move up the tree from the lowest branches. Over time, the tree slowly declines.

## Fire Blight

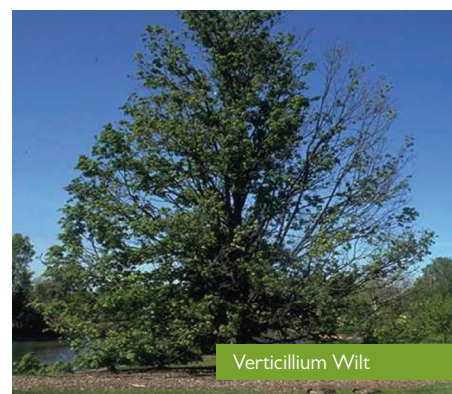
Fire blight is a bacterial disease that affects trees and shrubs in the rose family, including apples, crabapples, and hawthorns. In early spring, flowers can be infected with the bacterium, resulting in blossom blight. New leaf growth can suddenly wilt and turn black or brown, giving the appearance of having been scorched by fire. Cankers can occur on twigs, branches, and stems.

## Diplodia Tip Blight

Diplodia tip blight is a fungal disease of stressed conifers, especially pines. Austrian pine is the most susceptible host. When the new needles at the branch tips, or candles, are expanding in spring, they become stunted and turn tan or brown. Typically, all needles on the current season's shoot are killed. Symptoms often start in the lower half of the tree and progress upward. As lateral shoots are killed, whole branches may die back to the trunk, disfiguring the tree.

## Verticillium Wilt

Verticillium wilt is a serious soil-borne fungal disease that can affect hundreds of plant species. Most afflicted plants are infected through their roots. The fungus spreads into the branches and stems through the tissues that carry water, cutting off the water supply to the leaves and causing them to wilt. Leaves may turn yellow and branches may die back, sometimes in only part of the tree.



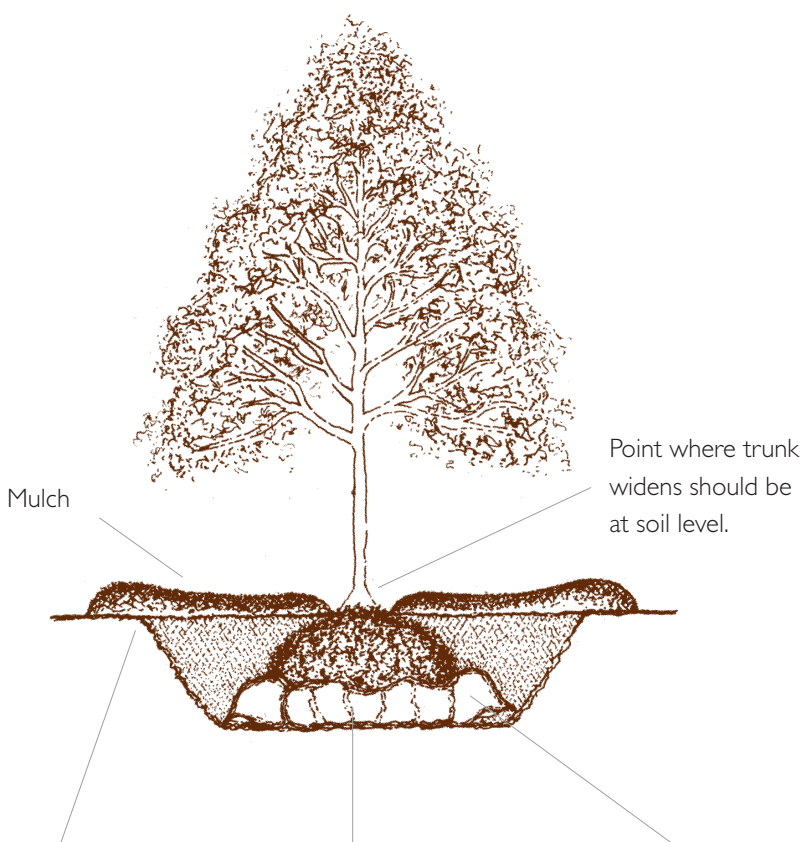
# PLANTING TREES

Plant a tree the right way so it has the best chance to thrive and will provide greater benefits throughout its life. Follow these tips to give your tree a good start. For more information and help selecting the right kind of tree, see [mortonarb.org/plantadvice](http://mortonarb.org/plantadvice).

Trees are measured by the caliper inch, meaning the diameter of the trunk in inches.

## A wide hole, not too deep

A tree needs a wide, shallow planting hole so it can spread out new roots. Trees that are balled and burlapped lose between 70 and 90 percent of their root mass when they are dug up for transplanting.



Dig the hole no deeper than the root ball and 2 to 3 times as wide. Wider is better.

When the tree is in the hole, remove as much wire or rope as you can reach.

Tuck the top  $\frac{1}{3}$  to  $\frac{1}{2}$  of the burlap down around the sides of the root ball. Fill in around root ball with soil that was removed.

## Ways to buy trees

Trees from nurseries come one of three ways: bare root, balled and burlapped (B&B), or potted (containerized).



Bare root    Balled & burlapped (B&B)    Potted

**Bare root trees** have exposed roots without any soil on them. The roots must be kept moist and covered because they can dry out quickly. Bare root trees are usually small—less than 2-inch caliper—and should be planted when dormant (late fall or early spring).

**Balled and burlapped trees** are dug up with some roots in a ball of soil that is then wrapped in burlap. The soil helps keep the roots moist.

**Potted trees** are becoming widely available. They can become rootbound, so remove the pot and carefully unwrap or even cut back circling roots when planting.



# MULCHING

A layer of mulch over its roots helps any tree grow and thrive. It is especially important for newly planted trees, but mulch is good for established trees, too. For more information, see [mortonarb.org/plantadvice](http://mortonarb.org/plantadvice).

A young tree that is mulched may grow twice as fast because it is better able to develop roots.

Mulch helps keep tree roots cool in the summer and holds moisture in the soil. It keeps lawn mowers and string trimmers safely away so they do not damage the tree's bark. Mulch also deters weeds and improves the soil as it breaks down.

Mulch should be made of plant material that will decompose over time.

The best material is chipped or shredded wood, although leaves and grass clippings can be used. Compost also makes a fine mulch. Do not use gravel or stone.

Spread mulch in a wide saucer shape around the tree's trunk.

Mulching imitates the way trees grow in nature. In the wild, the forest floor is covered with a layer of twigs, decomposing leaves, branches, and other dead plant matter.

In urban areas, trees do not have this natural mulch layer and often have to compete with turfgrass for nutrients and water. Replacing grass with mulch protects trees and helps them grow.

Maintaining a mulch layer over a tree's root zone is one of the most important and effective ways to help trees live long, healthy lives.

## The right way to mulch

- Spread as wide as possible
- 3 to 4 inches deep
- Saucer shape
- Keep clear of tree's bark



Spread mulch 3 to 4 inches deep in a wide circle around the tree trunk. Ideally, mulch should cover the whole area under the tree's branches. For newly planted trees, make the circle at least 4 to 6 feet across.

Form the mulch into a low saucer shape a little higher at the outer edge. This will contain rainwater so it can soak down to tree roots.

Make sure the mulch does not touch the tree's bark.

If there is a lawn under the tree, spread mulch right on top of it rather than digging out the grass. The grass beneath the mulch will die, which is better for the tree.

## Avoid these mistakes

- Don't mound mulch against trunk
- Don't let mulch touch bark
- Don't use synthetic materials, gravel, or stone



Never pile mulch against the trunk of a tree. It can trap moisture and cause the bark to rot, making the tree vulnerable to disease and insect problems.

Synthetic materials, gravel, and stone are not good insulators and do not break down to improve the soil.

Most tree roots are just below the soil surface. Typically, 90 percent are no deeper than 18 inches.



## MEET NATURE NEIGHBORS *With iNaturalist*

JUNE 1, 6:30 PM  
ST JAMES FARM FOREST PRESERVE  
WARRENVILLE



*Learn how to use iNaturalist for  
identifying plants, bees, butterflies  
and more*



*Practice making observations  
outdoors (dress for the weather)*



*Be part of the super generation saving  
monarch butterflies*



FREE - All ages - under 13 accompanied by a parent  
Register: [sierraclub.org/illinois/river-prairie](https://sierraclub.org/illinois/river-prairie)

[dupagemonarchs@gmail.com](mailto:dupagemonarchs@gmail.com)

[dupagemonarchs.com](https://dupagemonarchs.com)



## MEET NATURE NEIGHBORS *With iNaturalist*

JUNE 1, 6:30 PM  
ST JAMES FARM FOREST PRESERVE  
WARRENVILLE



*Learn how to use iNaturalist for  
identifying plants, bees, butterflies  
and more*



*Practice making observations  
outdoors (dress for the weather)*



*Be part of the super generation saving  
monarch butterflies*



FREE - All ages - under 13 accompanied by a parent  
Register: [sierraclub.org/illinois/river-prairie](https://sierraclub.org/illinois/river-prairie)

[dupagemonarchs@gmail.com](mailto:dupagemonarchs@gmail.com)

[dupagemonarchs.com](https://dupagemonarchs.com)

