



Tree Care Resource Guide

Trees are living investments that add beauty, economic value, and ecosystem services. It is important to take the right steps and make choices that make sense for you and your trees. We frequently make assumptions that if a tree still has leaves it is doing just fine. However, it can really help your trees prosper to take a short amount of time to check in and see how they are doing.

This resource guide is intended to touch on insights to consider in your landscape when it comes to selecting and caring for trees. Links to reliable and recommended resources are provided to dig a bit further and to view diagrams, photos, and videos.

Benefits of Trees

It's no secret that trees provide benefits, and the choice and placement of trees can increase or decrease those benefits. We tend to forget that trees need our care and management beyond when they are newly planted or in a poor state. A tree is a living being and not a static fixture to be overlooked or forgotten. The following are a few major ways that trees provide benefits.

Economic benefits

- Increased property value through enhanced design, beauty, and privacy. Trees can also reduce noise and glare.
- Energy savings through shading in summer, sunlight in winter, and windbreaks based on placement in the landscape.
- Reduced chance of erosion and flooding.
- Growing your own food such as fruit and nuts.

Ecosystem Benefits

- Cleaning air and water along with absorption and retention of CO2.
- Water retention, which helps both lawn and gardens to thrive.
- Water management filtration, which results in chemicals being removed from waterways. The right trees in the right place may also reduce the effects of flooding.

Wildlife Benefits

- Many creatures benefit from the resting and nesting places.
- Leaves, seeds, nuts, fruit, bark, and sap all provide food to a variety of creatures.
- Keystone tree species are those deemed critical to a wide number of species of wildlife.
 For example, in Minnesota, an oak provides support for 317 species of butterflies and moths, and a willow 359 species. (MN State Horticultural Society)

Benefits Resources	Resource Link	Provided By
Benefits of Trees Quick video on how trees benefit our daily lives. Value of Trees to a Community	https://youtu.be/G2NF5WOMifY?si=O5mRBe uDPx0h2NYv https://www.arborday.org/trees/benefits.cfm	UMN Urban Forestry Arbor Day
Tree Appraisal and the Value of Trees Document highlights the process of valuation of a tree.	https://www.extension.purdue.edu/extme dia/fnr/fnr-473-w.pdf	Purdue Extension
Learn about the importance of keystone species Help support biodiversity by planting the super supporters of wildlife	https://homegrownnationalpark.org/keyst one-trees-and-shrubs/ https://twincities.wildones.org/wp- content/uploads/sites/32/2022/04/Keston eSpeciesSoftLandings-final-20220414.pdf	Homegrown National Park Wild Ones

Your Trees and Your Site

Whether you have been in your house or apartment for thirty years or just moved in it is important to understand what is present here and now. Perhaps you have added some trees, or maybe you don't know how to place what you have just purchased. Trees provide different benefits and have different requirements. Identifying issues and acting to address them will always start with what kind of tree you have. It will be the first question a support person such as a Tree Care Advisor or an arborist will ask before determining next steps. A couple of things you may find interesting:

- Many diseases are family or species specific, and diseases can have life cycles that are related to more than one kind of tree or shrub.
- Some pests impact specific trees and/or tree species more than others.

Identification

If you have planted a tree, you may still have the tag and know the species. However, tree identification need not be down to the species level to start finding resources and assistance. Knowing you have an oak versus a maple is a starting point. If you are asking for help in identifying a tree, it is great to take a few clear pictures of the leaves and buds, how the leaves are situated on the branch ("arrangement"), the bark, and the overall form or shape of the tree.

Soil Conditions

Site conditions play an important role in the support of any plant. Here are two suggestions:

- Identify your soil type and soil pH. This information will help address issues as well as inform the choice for a new tree or shrub.
- Observe the level of moisture in your soil. Moisture levels help determine both the selection and placement of trees and shrubs. Watch where the water runs during a heavy rain event. Note where it collects and how quickly it drains into the soil.

Tree ID and Soil Conditions Resources	Resource Link	Provided By
Tree Identification A step-by-step guide that is general to the Eastern U.S.	https://www.arborday.org/trees/index- identification.cfm	Arbor Day Foundation
Tree Identification Cards and a Beginners Guide to Tree ID	https://trees.umn.edu/trees/tree- identification	University of MN Urban Forestry
Trees in Minnesota The focus will be more on native trees and may not include many of the cultivars present in our landscape.	https://www.minnesotawildflowers.info/page/trees	Minnesota Wildflowers
Soil Testing Laboratory Form and instructions on how to send in a soil sample	https://soiltest.cfans.umn.edu/	University of MN Department of Soil, Water and Climate
Gardening in the Shade Provides insights on sun in landscapes along with a link to a tree benefit calculator.	https://extension.umn.edu/planting- and-growing-guides/gardening- shade#amount-and-quality-of- sunlight-1218962C	University of MN Extension

Keeping Records

Keeping records – even a simple notebook – will help you remember what kind of trees you have, when they were planted, site conditions, and what tree services (if any) you have used. If you have had issues, keeping track of when the symptoms first occurred and a description of signs and symptoms provide great information. Also note any actions you have taken.

Selection and Placement of a Tree or Shrub

When you decide to plant a new tree or shrub you will use the information gathered about your current landscape. Ensuring you have the space and conditions to support the tree you desire is a critical first step.

Goals

Start with your goals that may include a desire to:

- Create more shade, privacy or a windbreak.
- Enhance the design and beauty of the landscape.
- Support wildlife such as birds and insects.
- Grow fruit or nuts for your own consumption.
- Improve water retention.

Factors that impact choice will include space, light, and aesthetics. Ask yourself:

- Will the tree have the space to grow to maturity both horizontally and vertically without interference? Don't plant on an easement or a large tree under power lines.
- Will the amount of light required be available? If there are other trees not yet at mature heigh, factor in their future growth as well.
- What aesthetics are desired, such as deciduous or evergreen, appearance factors such as shape, fall color, winter interest? Explore ideas in your neighborhood, parks, or even what your city offers during its tree sale.
- Will there be new hardscape areas such as patios or driveways in the future? Allow for the roots to properly spread and consider the impact during construction.

Selection

Choosing a new tree can be a wonderful but daunting process. These resources are a great way to explore. Also included are resources to help identify invasive species and why they should not be planted.

Tree Selection and Placement Resources	Resource Link	Provided By
Tree Placement on Home Grounds Contents include function and placement of trees. Examples include shading, screens, accents, and planning with existing trees.	https://extension.missouri.edu/pu blications/g6900	U of Missouri
Plant Selector and Placement Some quick basics and considerations for sites and selections.	https://itrees.com/kb/tree- layout.html/	Itrees.com MN DOT

	https://plantp.dot.state.mn.us/ plant/faces/index.jsp	
Choosing the right tree or shrub for your area Key questions to ask - coniferous, deciduous or shrub, size and other considerations. These links also have tree recommendations.	https://www.dnr.state.mn.us/treec are/righttree-shrub.html https://www.dnr.state.mn.us/tr ees/native-trees.html	MNDNR
Recommended trees for Minnesota including specific regional lists. These resources also assist in choosing climate resilient trees.	https://extension.umn.edu/managing-woodlands/climate-ready-woodlands https://forestadaptation.org/learn/resource-finder/tree-species-projections-ecological-sections-minnesota	UMN
Native Plants and Birds Database: Bring more birds to your home with native plants by filtering a database using your zip code. Trees and shrubs appear along with the birds they attract.	https://www.audubon.org/native- plants	Audubon
Pollinator Help This PDF provides a list of native trees and shrubs that support pollinators.	https://drive.google.com/file/d/1eV udvkwjLQWT5- bYUz4i3vPp2OjnT05q/view?pli=1	Heather Holm
Morton Arboretum Tree Database Total entries include 264 trees, and additional filters such as general appearance, soil and several condition tolerances may be applied to help choose the right tree for your needs.	https://mortonarb.org/plant-and- protect/search-trees-and- plants/?search_string=&tp_plant type=tree	Morton Arboretum
Invasive Terrestrial Plants Along with education about invasive plants, this site also lists the trees and shrubs that are now listed as invasive in Minnesota.	https://www.dnr.state.mn.us/invasives/terrestrialplants/index.html	MNDNR
The Threat of an Invasive Species This four-minute TED talk explains what an invasive species means to our ecosystem.	https://www.youtube.com/watch?v =spTWwqVP_2s	TED-Ed

Planting a Tree

Trees are available in different kinds of stock types and containers. It's important to match the information on how to plant with the right stock type to ensure you properly plant the tree. It is also critical to get the tree planted at the right depth with the proper placement of mulch. Roots are an important consideration as well, since planting with roots wrapping around the stem may significantly shorten the life span of the tree.

Planting a Tree Resources	Resource Link	Provided By
Planting and Transplanting Trees and Shrubs Information includes planning the site, different tree stock types, proper preparation, and planting.	https://extension.umn.edu/how/planting-and-transplanting-trees-and-shrubs	UMN Extension
Planting a Tree or Tree Seedling in Minnesota Short videos or downloadable documents for planting a containerized tree or a tree seedling. Additional documents for bareroot, balled or burlapped trees.	https://www.dnr.state.mn.us/tree care/residential_plant.html	MNDNR
Plant a Tree the Right Way PDF with images and directions for planting containerized and B&B trees and shrubs.	https://treetrust.org/wp- content/uploads/2021/03/comm unity-forestry-plant-a-tree.pdf	Tree Trust

Basic Care and Maintenance

Basic care starts with observation and taking notes for future reference. While care considerations are similar throughout a tree's life, there may be some additional needs for each phase of its life.

Age of Trees

The life-stage of a tree will require care to ensure proper growth and a long life.

- Newly planted tree care will focus on watering, mulching, and protecting from critters that can do significant damage to a young tree.
- Early years may require pruning to ensure a dominant leader is developed, and lower branches removed as necessary. Early years will also require watering in times of drought.
- Trees at mature growth and older trees may be more impacted by disease and require
 additional pruning or treatment. Doing a yearly assessment will help to look for patterns
 and assess if the tree is not thriving or is in decline.

Watering

Proper watering is one of the most important things you can do to help your tree stay vigorous. Watering wisely will depend on factors such as site and weather conditions, specific species needs, and the impact of stressors. You will want to attune yourself to what your tree needs throughout the seasons and years.

Watering Resources	Resource Link	Provided By
Watering Newly Planted Trees and Shrubs Provides details on how much is needed for how long.	https://extension.umn.edu/planting-and- growing-guides/watering-newly-planted- trees-and-shrubs	UMN Extension
Watering Established Trees and Shrubs	https://extension.umn.edu/planting-and- growing-guides/watering-established-trees- and-shrubs	UMN Extension
Watering the yard and garden in extreme drought	https://extension.umn.edu/yard-and- garden-news/gardening-extreme-drought	UMN Extension

Pruning

Pruning alters the form and growth of a plant. Its purpose goes beyond simply "shaping up" the tree or shrub for aesthetic purposes. In fact, many problems may be prevented by pruning correctly during the formative years of a tree or shrub. Pruning may:

- Offer preventive maintenance for both insect and disease damage. The late dormant season is generally the best time for pruning, but you need to identify your tree to ensure you match the right time to prune to the tree's growth and flowering cycle.
- Provide additional light and air filtration to the inner branches of the tree.
- Create clearance height for large vehicles and/or pedestrians.

Pruning Resources	Resource Link	Provided By
Pruning Trees and Shrubs Many sections cover the why and how of pruning, including a discussion of disease prevention.	https://extension.umn.edu/planting- and-growing-guides/pruning-trees- and-shrubs	UMN Extension
General Pruning Techniques This in-depth publication covers timing of pruning, pruning methods,	https://content.ces.ncsu.edu/genera l-pruning-techniques	NC State Extension

maintaining shrubs, and specialty pruning. Has more photos than UMN site.		
Pruning Flowering Shrubs Good diagrams and advice on pruning for types of shrubs.	https://njaes.rutgers.edu/fs1221/	NJ Agricultural Experiment Station
Pruning Evergreens This site provides specific advice by type of evergreen.	https://www.mortonarb.org/trees- plants/tree-and-plant- advice/horticulture-care/pruning- evergreens	Morton Arboretum
Avoid pruning drought-stressed trees	https://extension.umn.edu/natur al-resources-news/avoid- pruning-drought-stressed-trees	UMN Extension

Tree Health

Be proactive and perform a yearly assessment of your trees' health and make notes on what may be the start of a problem. Evaluate after major storms and other events as well. Making some notes will help identify the best actions to take, and perhaps nip an issue in the bud.

It's also important to look for signs that indicate the tree may have an issue that needs to be addressed by a tree care professional.

Tree Part	Examples of What to Look For
Crown	Dead tops and branches can be a key sign and are often not seen until the disease has already progressed to a fatal stage.
Trunk and Branches	 There should be a single dominant stem. Co-dominant stem, or weak branch joins may contribute to failure. Cracks that is deeper than the bark Decayed wood Cankers and fungal growth may indicate deeper problems
Roots	Lack of a root flare can be an indication that the tree was planted too deeply. Crossing or circling roots.
Bark	Bark peeling varies by species and can be a natural occurrence during a season. If it is excessive, seek further information.
Leaves	Leaves that are curled, discolored, etc., may be a sign.

Preparing your trees for the seasons can be key for a longer-lived tree. While we cannot control the weather, being aware of how you can prepare and pro-actively care for your trees can lessen potential damage. You cannot always stop critters from entering your yard but can take steps to minimize harm. Also, it's important to understand what constitutes risk when a tree appears to be damaged to the point where it is at risk of dropping large branches or falling.

Tree Health Resources	Resource Link	Provided By
Basics of assessing a tree Descriptions and pictures of some of the common issues	http://extension.msstate.edu/site s/default/files/publications/public ations/P3717_web.pdf	U of Missouri
Winter Season: Ice, Snow and Critter Damage Sun, wind, and cold temperatures can impact the health of your tree. Snow and ice can break branches and topple trees. Salt can do damage. This site covers steps you can take to minimize injury.	https://extension.umn.edu/plantin g-and-growing-guides/protecting- trees-and-shrubs-winter	UMN Extension
Storm Damage to Landscape Trees Healthy trees have a better chance of surviving storm damage. Tree imperfections and cuts or wounds can make them more vulnerable. This site covers causes of tree weakness and prevention practices. It also covers treating damage after a storm.	https://extension.umn.edu/plantin g-and-growing-guides/storm- damage-landscape-trees	UMN Extension
Tree Risk Assessment Articles about ensuring that hazards are not seen everywhere.	https://www.arborday.org/trees/bulletins/documents/015-summary.pdf https://www.treesaregood.org/Portals/0/TreesAreGood_Recognizing%20Tree%20Risk_0721.pdf https://www.arborday.org/programs/backyardwoods/documents/chapter-04-tips.pdf	Multiple sources
Construction Preparation This site covers before, during and after construction. Construction could mean building a new house on a wooded lot or making other large landscaping changes such as a patio or pool.	https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/preventing-construction-damage-to-trees-and-shrubs/#!	Morton Arboretum

Diseases and Pests

Many common tree diseases do not affect the overall health of the trees and the trees can tolerate them. Likewise, insects are not always a sign of decline and won't always negatively impact longer-term tree health. In fact, many trees rely on insects in a number of ways to survive and thrive.

However, some pests and disease can indeed be quite harmful. It is helpful to become familiar with issues commonly associated with your trees, and how much the tree can tolerate.

Identifying the issue starts with making notes and taking pictures of what appears to be a problem. Knowing how long the trouble has been around is also very helpful to assess the impact on the tree. Some examples of signs and symptoms may include:

- Leaves with holes, spots, fungus, discoloration
- Branches with webbing or fungus, dieback
- Flowers or fruit that is deformed or discolored
- Canopy with thin, dead or dying branches
- Trunk with fungus, holes, cracking, overgrowth

Tree Diseases Resources	Resource Link	Provided By
Tree and Shrubs Problems Starts with two choice- one for deciduous and the other for evergreen and then choose a tree. Symptoms are described that may help you determine the problem.	http://apps.extension.umn.edu/g arden/diagnose/plant/deciduous/ http://apps.extension.umn.edu/g arden/diagnose/plant/evergreen/	UMN Extension
Diseases of Trees and Shrubs This site starts with a list of diseases with links to each for further detail. Additional links are provided to learn more about care, pruning and tree professionals	https://extension.umn.edu/solve- problem/plant-diseases#tree- and-shrub-diseases-1872363	UMN Extension
What Insect is This: Trees and Shrubs This site starts with choices to begin to narrow down the specific insect. Further detail is available on each.	https://apps.extension.umn.edu/ garden/diagnose/insect/trees- shrubs/	UMN Extension
Tree and Shrub Insects This site starts with a list of insects that are commonly found on trees and shrubs.	https://extension.umn.edu/yard- and-garden-insects/tree-and- shrub-insects	UMN Extension

Plant Disease Clinic If you wish to request a diagnosis for a specific disease, follow the directions on how to collect	https://pdc.umn.edu/submit- sample	UMN Extension
a sample for submission to the Plant Disease		
Clinic.		

Trees in Your Community

It can be helpful to understand what is happening in your own neighborhood. Your local community can be another good resource for information on selecting trees and knowing about current pests and diseases. Your area may have a city or county forester and/or a natural resources department. Some municipalities also hold tree sales and educational events for their residents. The trees offered in tree sales often reflect what the city has planned for diversity purposes or overall aesthetics. Your city may also keep a list of suitable tree-pruning contractors. Make sure you find the right professional to diagnose and treat your trees.

Tree Professionals	Resource Link	Provided By
Find an Arborist Search for an ISA Certified Arborist.	https://www.treesaregood.org/findan arborist	ISA
How to Hire a Tree Care Professional Professional arborists are trained to provide proper care, help maintain healthy trees and provide management when necessary.	https://extension.umn.edu/planting- and-growing-guides/how-hire-tree- care-professional	UMN Extension

Learn More

The sections above provide links to resources specific to the topic. But wait, there is more! The following sites have many more articles, pages, and brochures available to add to your educational reading.

And feel free to ask a Tree Care Advisor for assistance. We love questions!

Basic Resources	Resource Link	Provided By
State Tree Board The Minnesota Shade Tree Advisory Committee (MnSTAC) serves as the state tree board. MnSTAC hosts monthly educational forums and has a weekly newsletter.	http://www.mnstac.org/	MnSTAC

Trees This site has info about the benefits of trees, what is harming our trees, and tree tips including a downloadable Tree Owner's Manual.	https://www.fs.usda.gov/learn/trees Tree Manual https://www.fs.usda.gov/Internet/F SE_DOCUMENTS/stelprdb536839 2.pdf	USDA Forest Service
Tree Care Site Information-rich website from planning through after-planting care.	https://www.dnr.state.mn.us/treeca re/index.html	MNDNR
Trees This site focuses on how trees manage stormwater runoff and urban forestry but also have links about general information about trees.	https://stormwater.pca.state.mn.us/ index.php?title=Trees	Minnesota Stormwater Manual
Tree Owner Information Tree care topics and related brochures are provided by the International Society of Arboriculture (ISA).	https://www.treesaregood.org/treeo wner	ISA
Tree Planting & Care Comprehensive tree care tips.	https://www.arborday.org/trees/ind ex-planting.cfm?TrackingID=404	Arborday.org

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