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EXPERT REVIEWED

Author

Lindsey Purcell,
Urban Forestry Specialist,
Purdue University

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Trees and Electric Lines

The Need to Get Along

Electrical utility lines serve nearly every neighborhood, adding efficiency and luxury to every day of our lives.

Likewise, trees enhance our neighborhoods and bring beauty to our surroundings. Trees improve our air and water quality. They shade our homes, screen undesirable views, and help reduce noise along with many other ecosystem services.

We want both.

For us to have both, though, trees and electrical lines must share space where they sometimes conflict with each other. This can create dangerous situations. For example, trees growing too close to overhead electrical lines create safety and reliability concerns that can lead to injuries or cause power outages. Trees are the leading cause of outages for most utilities.

This cohabitation also can compromise compliance with environmental and regulatory rules. In the United States, most utility service providers are required to conform to standards and or regulations which contain provisions for vegetation management. Yet, pruning or removal of interfering trees often causes controversy.

The more we all know about vegetation management and the requirements facing utilities, the more likely it is that we can protect and properly maintain the trees in our urban forests. This publication outlines the issues surrounding the conflict between trees and electrical utility lines as well as ways to avoid that conflict.

Low-growing trees can coexist with utility lines.

Boundary Issues

As communities expand, more property owners become concerned about the effects of necessary infrastructure and utilities on their urban trees. Utilities and property owners can coexist with good communication, education, and proper planning. One major challenge is homeowner understanding of boundary issues relative to ownership and rights. Most homeowners don't know the location, purpose, or sometimes even the existence of adjacent easements, setbacks, and rights-of-way.

Site plans indicate boundaries around your property.

All too often, property owners do not know where the boundaries are around their property or what utility companies, government, and others have rights to use that ground. To make matters worse, definitions of land use can vary with the application and within each community. However, it is important to understand these basic definitions.

- *Right of way*: Specific and particularly described strip of land, property, or interest therein devoted to and subject to the lawful use, typically for general transportation purposes or conveyance of utilities. A right-of-way can be public or private; it is to be assumed to pertain to both public and private unless it is specifically identified as one or the other.

- *Setback line*: A line that establishes the distance a building, structure, or portion thereof, and can be located from a lot line or right-of-way line.

- *Setback***:** The horizontal distance established by ordinance between a right-of-way line or a lot line and the setback line.

- *Easement*: A prescriptive right of use over the land of another for a specific purpose providing a non-possessory interest in the property of the landowner and that prohibits the landowner from interfering with the easement holder's use of the easement.

- *Prescriptive Easement*: An easement upon another's real property acquired by continued use without permission of the owner for a period provided by state law to establish the easement. Potential issues with this type of easement are that they aren't always revealed in title reports and the exact location or use is not always clearly defined.

Most people only poorly understand the implications of having overhead lines on or near private property and how that relates to what should or should not be planted. Experience shows that if property owners understand that utilities have the right to prune in established rights-of-way (ROWs) and easements and recognize where those zones exist, they develop better relationships with utilities. Utility service partners (USPs) need access to privately owned property in many situations to perform necessary maintenance and to ensure safe and reliable delivery of power. This access is often granted through utility easements.

In many areas, locations of clear property lines and easements are not known or may not even exist. In these instances, property owners need to know where to go with questions or concerns prior to the work, during the work, or after work is completed. They can get recorded easement information from a government register or recorder in the clerk's office. This information can also be found in the title work associated with the property. However, some title work limits research on these boundaries to recent history (50 years or less) and can miss a complete disclosure of activity on the parcel. Anyone buying property should make sure to identify the boundaries during the purchasing process.

If homeowners ever question necessary pruning, the electric utility should be ready to provide evidence or proof of access rights to properties and easements so that property owners recognize contractors have the right to work there.

Safety

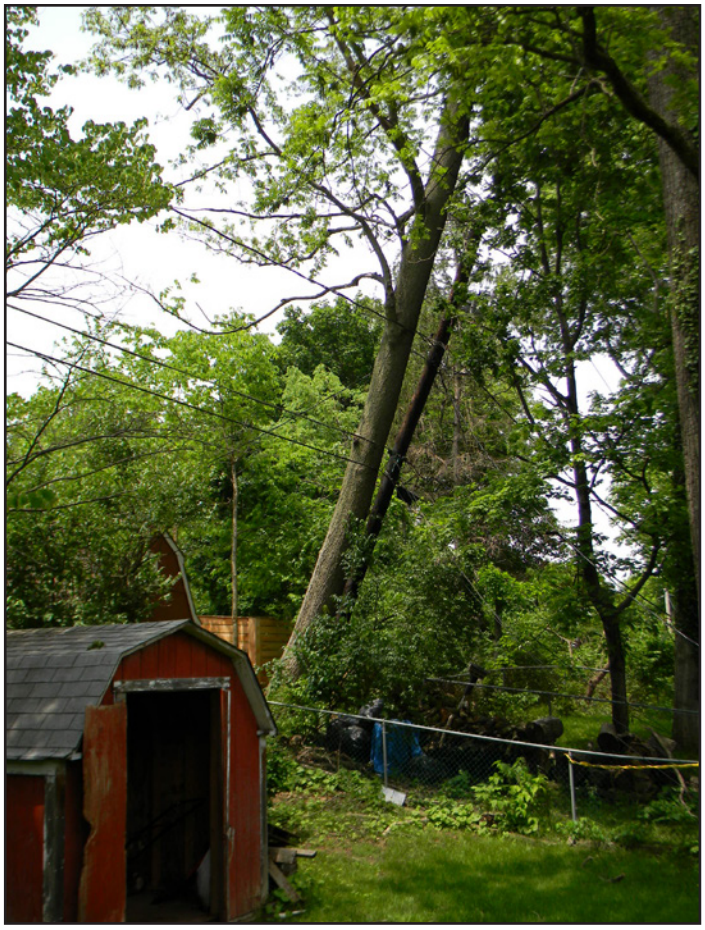
Part of the responsibility for electric utility safety rests in the hands of the homeowner. With thoughtful selection, proper planting, and maintenance, the right tree in the right place can offer many years of enjoyment and other benefits. However, poorly chosen trees or poor locations can create dangerous situations or liabilities for the future.

Overhead utility lines are not protected by insulation; anything that comes in contact with or even comes close to a utility line becomes a direct pathway for an electrical current that can result in electrocution. **Every** utility line or wire should be considered energized and dangerous.

Safety around utilities is a priority for everyone. Trees can become obstacles for utility companies in their efforts to provide safe and reliable service. Most tree conflicts are caused by tall-growing trees planted too close to or directly under utility wires, resulting in branches that grow into prescriptive clearance limits. Many issues result from weather events, such as wind and ice storms that cause limbs or even whole trees to fall into electrical lines and other utility equipment.

Trees near utility lines inherently carry serious risk to property owners, who may be injured or killed when working on trees near power lines. Child safety is even more of a concern where climbable trees placed close to nearby lines may result in fatal contact.

Injuries can be prevented, interruptions in service can be avoided, and trees can be preserved if we work together. Vegetation management is absolutely necessary where people, trees, and utilities coexist and where maintenance around utility lines is addressed by qualified line-clearance arborists who have electrical hazard certifications.



A dangerous situation results when trees and power lines conflict.

Service

Power companies want to provide safe and reliable service. To that end, they are required by federal law to document their utility vegetation management program procedures and annually inspect lines carrying 200 kV and above. The Federal Energy Regulatory Commission (FERC) has granted the North American Electric Reliability Corporation the authority to audit these management plans, review the work completed, and actually levy fines when appropriate to ensure that the proposed vegetation management is actually being done according to the standard.

In Indiana, state rulings require that vegetation-management activities adhere to current industry best management practices in pruning. Additionally, recent state decisions have set standards for pruning practices and for notification of property owners adjacent to utilities. This includes notification of when a utility service provider can prune or may not prune to meet clearances. State oversight committees closely monitor their effectiveness and activity.

Utility service providers are constantly monitoring and improving their transmission systems. Transmission lines are the major arteries that move very high-voltage electricity from the power plant to substations, which then distribute the energy locally. Each year, power lines are inspected, some are rebuilt, and additional transmission lines are added to serve new loads.

Reliability and Power Outages

While property owners retain ownership of the transmission corridors that cross their properties, USPs often hold easements that allow access to perform regular maintenance within the rights-of-way. This includes pruning and removal of trees, shrubs, and other vegetation that may interfere with the ability to perform maintenance or the transmission of electricity or other forms of energy. One of the most time-consuming and expensive maintenance concerns that all utilities face is vegetation management to prevent power outages or disruption.

A power outage occurs when there is direct contact between two conducting lines (phase to phase) or by providing a path for electricity to travel to the ground. There are several ways that vegetation—trees in particular—can cause power outages.

- First, left to grow without intervention, many tree species naturally grow or sway into power lines and provide direct paths for electricity to travel to the ground from energized lines.
- Second, a power line can sag and sway under certain conditions, causing direct contact or a flashover that occurs when electricity arches from an energized line to a near-by tree.
- Third, ice and wind storms can break limbs or topple entire trees onto lines, poles, or other equipment.

Regardless of the cause, power outages occur when the flow of electrical power is impeded by vegetation conflicts with energized wires.

Utility corridors are established directly below and along the sides of electrical lines in an effort to prevent vegetation-induced power outages. Federal and state rules and regulations provide guidelines describing how utility companies must keep these utility corridors clear of any tree that has the potential to interfere with the safe and reliable operation of the electrical system. This width and distance between power equipment and vegetation varies by the line voltage. In general, as the voltage increases, so does the distance that vegetation must be kept away from transmission lines.

Direct contact can cause flashovers.

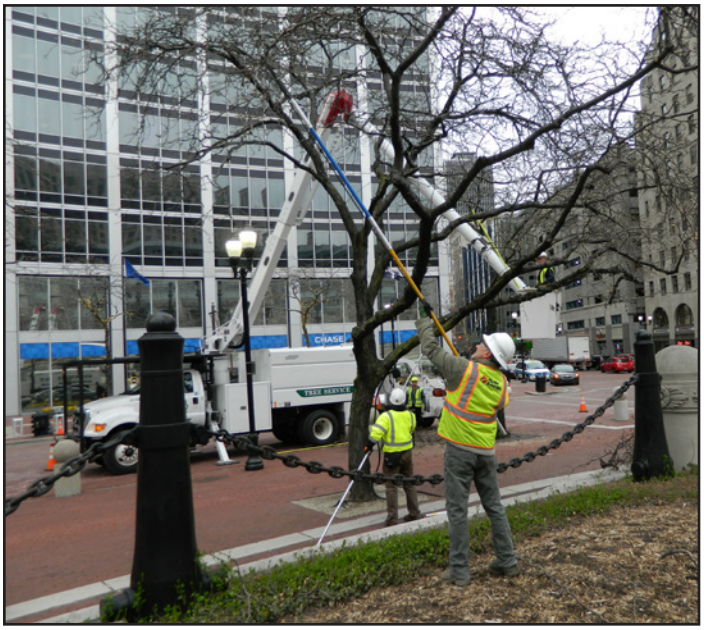
Safe distances between trees and utilities allow for sustainable tree plantings.

A Plan for Safety and Reliability: The UVM

Most utilities have a "utility vegetation management" (UVM) plan that documents procedures used to control undesirable tree and plant species within the utility corridor. These vegetation management plans detail the most effective and efficient ways to maintain the rights-of-way in a safe manner for the transmission of electricity. This is termed a "defense in depth" strategy for preventing outages and, most importantly, to maintain public safety for people around trees and power lines. This is clearly defined in Indiana Code, which, in the definition of "public safety situation," includes tree-wire contacts and hazardous trees that could fall on the electrical conductor.

In the case of power line rights-of-way, any tall-growing trees, shrubs, brush, and vines are considered undesirable species. These plants must be managed to provide safe and reliable operation of the electrical system. In fact, removal is often the best management practice to reduce maintenance inputs from the utility provider and for safety around the lines. In many cases, it's better to remove the tree as opposed to pruning it severely, which can leave the tree unsightly or unsafe. Vegetation management is traditionally accomplished through mechanical means and/or with the application of herbicides to control undesirable vegetation.

Tree pruning is not only an important maintenance activity for most electric utility companies, it is also one of the most costly. It requires billions of dollars annually to keep trees and other plants from the potential of interrupting electrical service. Most utility companies or their contractors use pruning techniques that meet current industry standards. The International Society of Arboriculture (ISA) has developed a series of Best Management Practices (BMPs) for interpreting tree care standards and providing guidelines of practice for arborists, tree workers, and people who employ them.



Special training is required for tree maintenance in populated areas.

More specifically, one BMP focuses on the selection and application of methods and techniques for vegetation control for electric rights-of-way projects and gas pipeline rights-of-way. It also serves as a companion publication for the *American National Standard for Tree Care Operations—Tree, Shrub and Other Woody Plant Management—Standard Practices (Integrated Vegetation Management a. Electric Utility Rights-of-Way)*. These peer-reviewed standards are proven best practices for tree health and safety and are required in many cities. The information in this guide promotes the directional pruning method, which minimizes stress from pruning and focuses on tree health while meeting necessary clearance objectives. The ANSI standards provide specific contract language and directives. The accompanying best management practice guide provided by the International Society of Arboriculture provides the how-to information for training and education. Indiana Code indicates that any routine utility vegetation management, such as pruning, be limited to less than 25% of canopy per tree, which is consistent with best management practices prescribed in the standards.

For the most part, qualified line-clearance arborists manage vegetation with manual tools such as chain saws, handsaws, and loppers. For transmission lines and distribution lines in more rural areas, they may use land and air machines—the most efficient and cost effective for clearing dense vegetation along many miles of utility corridors. Additional methods of control may include herbicide application to reduce stem density by eliminating undesirable species and promoting more utility-compatible plants. The advantage of manual techniques is that they are selective and can be used where other practices may not be possible, as in suburban and urban areas. However, manual techniques are very expensive and time-consuming, requiring much manpower and many resources.

Utility arborists are trained specifically for working around utility lines.

How much pruning is required? How often is the pruning needed? Why are they removing that tree? Vegetation clearance is established, but how much pruning is required to get the proper clearance? That is the challenge vegetation management experts face annually. These are often very contentious questions, the subject of much debate and research. Also, there is never a really clear, concise answer to any of them, because there are several variables. Typically, a qualified utility forester or vegetation manager will prescribe the amount or type of pruning or removal necessary based on:

- Tree growth rate
- Prevailing wind direction
- Tree species
- Tree health and vigor
- Environmental factors affecting growth
- Proximity of trees to wires
- Line configuration
- Line voltage
- Pruning cycles

Pruning trees to accomplish vegetation management objectives is the norm. However, often some trees must be removed. Typically, USPs are only involved with the maintenance and removal of trees and other vegetation that might endanger the safe and reliable operation of poles and lines for the delivery of electricity. When trees are dead or unhealthy, the utility forester will discuss with the adjacent property owner the possibility of removing trees. A tree may have a defect(s), which might cause it to fail. Some large-growing trees are so close to the lines and have to be pruned so severely that it becomes necessary to take the tree or trees down.

Situations where tree removal may be preferable to line-clearance pruning include:

- Tall- or fast-growing species growing directly under the lines that require frequent pruning and will never be allowed to achieve any sort of natural form.
- Saplings and brush under the lines, which have the potential to grow into the lines or clearance limits.
- High-risk trees with a potential to fall into the lines or any other equipment such as transformers and poles.

The amount or distance cleared is determined by the amount of voltage the line carries; the greater the voltage, the greater the clearance required to meet federal requirements and maintain safe distances. For example, a transmission line carrying 110,000 volts or more will require a 20-foot distance between the center point of the lines and the vegetation. A distribution line carrying 13,000 volts may only require a 10-foot clearance. To reduce frequency of pruning cycles, the determination of pruning dose is made based on growth rates and frequency of the pruning cycle. If the pruning cycle is three years, the utility arborist will prune to meet clearance requirements, then prune farther back on the anticipated rate of growth for the tree species to account for future growth before they return on the next scheduled visit. These distances are mandated by the Occupational Safety and Health Administration (OSHA) standards to protect nonqualified arborists from injury and death. The North American Electric Reliability Corporation (NERC) audits each utility service provider's UVM plans and activity. These must be adhered to, or serious fines can be levied against the USP if a sustained outage occurs on lines with 200 kV or more, or those deemed critical in the grid system.

On distribution lines, another consideration is pruning cycle, which is the frequency of vegetation management on a specified span or part of the utility line grid. These cycles or occurrences are often based on budget, expected regrowth rates and the amount of clearance that can be realistically obtained in the time of pruning activity. Maintenance cycles are generally shorter where there is a longer growing season or more fast-growing tree species. In areas with short growing seasons and with slower growing trees, the cycle can be longer. Some utilities conduct mid-cycle inspections to mitigate fast growers midway through a cycle. Typically, these cycles can range anywhere from 3 to 7 years.

Utility arborists prune for safe clearance around distribution lines.

Communication is a major part of the vegetation management plan. This means notifying adjacent property owners of pending work on vegetation within the utility corridor. In fact, in many states law requires utility service providers to properly notify property owners of any work that may affect or require access to nearby property. In Indiana and several other states, code requires the property owner's permission to enter their property if there is not an easement. This is an important step in protecting trees and people during the vegetation management process.

Evidence has shown that customer satisfaction improves when utilities inform customers of upcoming tree work, explain the reasons behind it, and give a basic time-frame for operations. However, it is important to know that if the property owner fails to respond to a notification, the state governing body (the Indiana Utilities Regulatory Commission in Indiana) sees this as implied consent, so direct permission is not required and the USP can proceed as needed to complete the work.

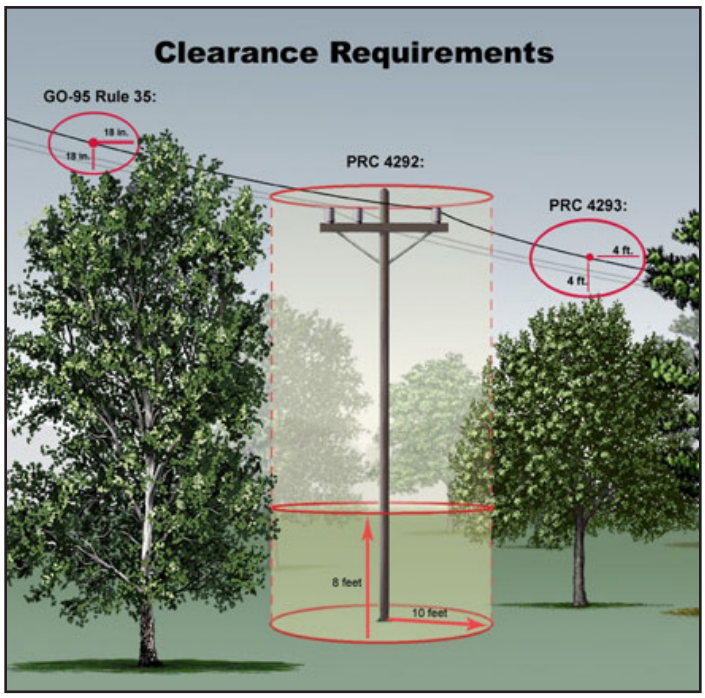
Utility service providers will provide notification before work is performed.

The new standards for tree trimming around utilities can be found at http://www.in.gov/oucc/2555.htm

There is no simple, clean answer to vegetation management around utilities. Tree pruning is required along with complete removals in certain conditions. Each situation is evaluated based on safety, service, and reliability. Many property owners are dissatisfied or displeased with the work required to meet the standards. This can create a divide between the consumer and the company that can develop into more critical disputes later. The best way to prevent unwanted or excessive pruning to your trees starts with planting the right tree in the right place. Sustainability should be the primary consideration in tree selection, placement, and maintenance. It is the property owner's responsibility to choose and place their trees in compatible locations that allow trees and utilities to get along rather than compete for the same space. This is where the conflict between consumers and utility service providers begins in many instances.

Call Before You Dig

The urban and suburban landscapes provide challenges for the utility service provider. Interactions among varying density of population, structures, residences, buildings, woodlots, and types of equipment are needed to carry electricity to the consumer. However, conflicts between electrical service equipment and trees can be avoided if landscape plants are selected and planted properly. They will provide many years of pleasure and paybacks. However, trees can become a serious safety issue and subjects of severe pruning or removal if they are planted too close to power lines. To ensure safety and sustainability when it comes to trees, proper planning is needed.



Proper planning and placement of trees will require little or no pruning to reduce conflicts.

Transmission and distribution lines are very similar as far as moving power and their safety considerations, but they differ in impact. Transmission lines are high-voltage lines that connect generation and bulk-transmission substations. They are typically farther above (over 22 ft.) and have large expanses between poles. Distribution lines carry less voltage, are lower overhead (15–18 ft.), and usually serve commercial and residential customers. They are more common in and around neighborhoods everywhere. This is the line type that has the most frequent tree and utility interaction. Regardless of the type of line, each must be considered a major factor in the determination of selection and location of any landscape plants.

Trees and brush that naturally grow too tall are regularly removed in utility corridors. Tall-growing trees naturally growing or planted beneath utility lines or those that may strike a line when falling must either be pruned, removed, or moved outside of the right-of-way. Problems can also arise when the eventual size of a mature tree is not considered when planting near a line. For example, a small silver maple tree that was purchased at a nursery can quickly grow and become entangled in overhead power lines. To prevent this dangerous conflict, regular pruning or even removal may be necessary to maintain clearance.

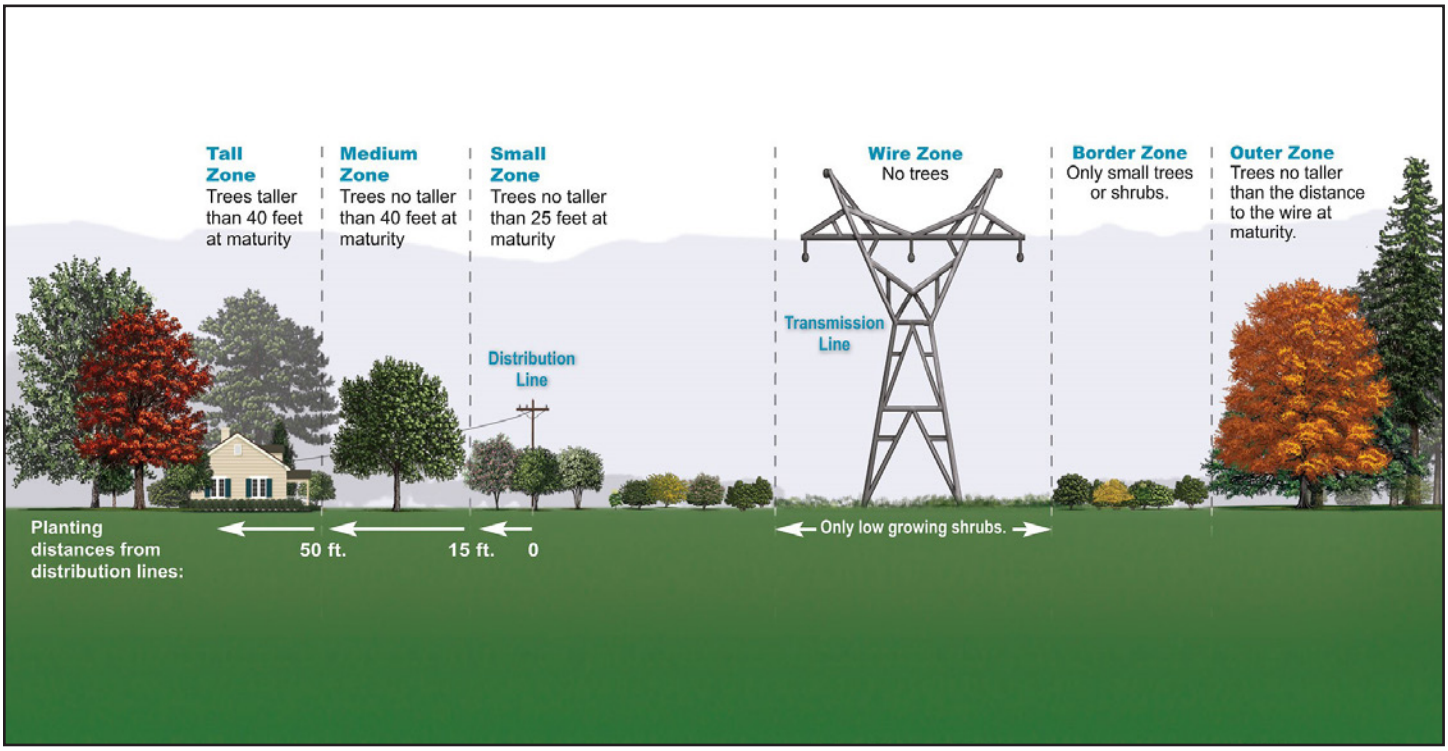
The USP must either prune or remove all trees that are potential hazards now or those that may create a risk situation in the future. As a result, all trees that have the potential to reach above 12–15 feet in height at maturity are subject to pruning or removal from the right-of-way corridor. Typical policy and practice for nearly all USPs is that property owners are regularly notified about planting and vegetation management.

As a homeowner or landscaper, if you are planning new landscaping, an important first step is contacting your utility service provider to discuss your idea. Most have urban foresters or utility arborists with specialized training in utility/tree interaction. This will avoid creating a future disruption to the maintenance and repair of power lines and the utility rights-of-way. This will also let the USP know about your project to avoid inadvertent removal or modification during standard vegetation management. Lastly, within the right-of-way, maintain a path for the movement of utility equipment. So, plan for access should there be repairs or maintenance needed with the utility.

How big will the tree get? Before the planting begins, consider the tree's mature size. When planting that newly purchased small tree, it is often difficult to imagine that in as few as 10 years it could have a significant impact in the landscape with an expanding canopy. When the tree nears its full-grown size, will it be too close to the house or other structures? How will it interact with above-ground and below-ground utilities? Will it cause problems for buried or overhead power lines? Consider the impact of wind, which can move trees even closer to the lines as they sway or if they fall. Just as selecting a plant for your soil conditions is important, picking a plant that matures to a height compatible with nearby electrical line is essential.

Fall distance of trees needs to be considered in placement of new plantings.

"The right tree in the right place" is a commonly used expression that emphasizes this key point. The distance from an electrical line dictates the maximum mature height of a plant. Directly beneath a line, plant heights cannot exceed 12 feet. Between 40 and 60 feet from the center wire, mature plants can grow up to 40 feet. Finally, 60 feet from the center wire, mature plant heights greater than 40 feet are allowed. Several trees, unfortunately, are not compatible with growing underneath or within the utility corridor and cannot be planted in this area for safety reasons. This table provides descriptions of several plants that are compatible with growing underneath and near the overhead electrical line.



Understanding clearance requirements before placing a tree is critical for preventing unwanted pruning or removal.

Utility-Friendly Tree List

The following list includes overhead utility-friendly (low-growing) tree species which may be compatible in areas of overhead utility lines. This list is not all-inclusive. Other species may be acceptable and each selection should be considered for mature size in relationship to the height of the overhead lines. Consult a utility forester or your provider for assistance. Be sure to comply with local regulations and ordinances. Size noted is typical for urban conditions; mature sizes should be less than 20 feet in most applications.

Species	H'	W'	Shape	Light	Description
Paperbark Maple (*Acer griseum*)	25	20	Upright, oval to rounded	Full sun to part shade	Trifoliate leaves, bright red and orange fall color; cinnamon brown to reddish brown exfoliating bark.
Shadblow Serviceberry (*Amelanchier canadensis)*	20	20	Oval to rounded	Full sun to part shade	White flowers in spring; red to purple fruit; yellow mixed with a little orange fall color.
Apollo Maple *Acer saccharum "Barrett Cole"*	25	10	Narrow, columnar	Full sun to part shade	Unique narrowness, dense branching and compact form make this dwarf and columnar Sugar Maple ideal for limited spaces. Dark green foliage withstands summer heat.
Autumn Brilliance Serviceberry (*Amelanchier x grandiflora* "Autumn Brilliance")	20	20	Rounded	Full sun to part shade	White flowers in spring; red to purple fruit; orange to red fall color.
Allegheny Serviceberry (*Amelanchier laevis*)	20	20	Upright, irregular	Full sun to part shade	White flowers in spring; red to purple fruit; late yellow to orange fall color.
Eastern Redbud (*Cercis Canadensis*)	25	25	Upright, spreading	Full sun to part shade	Early pink flowers along twig before foliage; heart-shaped leaves.
Pagoda Dogwood (*Cornus alternifolia*)	20	20	Rounded	Full sun to part shade	Horizontal branching; creamy-white flowers followed by blue-black fruit; red to purple fall color.
Cornelian Cherry Dogwood (*Cornus mas*)	20	15	Rounded	Full sun to part shade	Early yellow flowers before foliage; bright red fruit in summer.
Cockspur Hawthorn (*Crataegus crus-galli*)	20	20	Broad, rounded	Full sun	Showy, white flowers; red fruit; glossy foliage; thorny; attracts birds.
Thornless Cockspur Hawthorn (*var. inermis*)	20	20	Broad, rounded	Full sun	Thornless; other characteristics same as species.
Washington Hawthorn (*Crataegus phaenopyrum*)	25	25	Upright, spreading	Full sun	White flowers; showy, orange-red fruit; red-orange fall color; narrow thorns.
Royal Star Magnolia (*Magnolia kobus var. stellata* "Royal Star")	15	15	Oval to rounded	Full sun to part shade	White flowers with pink in early spring before leaves.
Crabapple (*Malus spp.*)					
"Sugar Tyme"	20	15	Upright, oval	Full sun	Pink buds; white flowers; red fruit.
"Centurion"	20	15	Upright	Full sun	Pink to red flowers; red fruit; red to bronze foliage.
"Donald Wyman"	20	25	Broad, rounded	Full sun	Pink to red buds open to white flowers; red fruit.
"Indian Summer"	15	15	Rounded	Full sun	Red buds; rose-red flowers; red fruit.
"Snow Drift"	20	15	Rounded	Full sun	Red bud; white flowers; small red fruit.
"Prairiefire"	20	20	Upright, rounded	Full sun	Pink flowers; red fruit.
Ivory Silk Japanese Tree Lilac (*Syringa reticulata*)	20	15	Rounded	Full sun	Creamy panicles of fragrant flowers in late spring; red-brown shredding bark.
Techny Arborvitae *Thuja occidentalis*	15	6	Upright, pyramidal	Full sun to part shade	Fast growing and dark green. Excellent for screens and tall sheared hedges. Good in sun or light shade. Very winter hardy.
Keteleeri Juniper Juniperus chinensis "Keteleeri"	20	10	Upright, pyramidal	Full sun	Dense evergreen tree with medium green, mostly scale-like foliage which is attractive year-round. This is a female cultivar that produces profuse, grayish-green, berry-like cones.
Hetz Columnar Juniper *Juniperus chinensis "Hetzii Columnar"*	15	8	Upright, pyramidal	Full sun	Multi-stemmed evergreen tree with bright green foliage and abundant bluish-green berries.

Indiana's "Call Before You Dig" law (IC 8-1-26) requires everyone that digs into the ground to contact Indiana 811 at least two full working days before starting a project. Anyone who digs should contact Indiana 811 first, whether it is to plant a tree, put in a new fence or children's play set, or any other reason. In 2003, during a General Assembly legislative session, officials revised the "Call Before You Dig" law and made it a requirement that all owners and operators of underground facilities become a member of Indiana 811. This law was again enhanced in 2009 to add penalties for certain infractions.

Other considerations include local regulations and ordinances. Check with local authorities about regulations pertaining to placement of trees. Some communities have ordinances requiring permits for tree planting, particularly in rights-of-way or on public property. Check with the local government office or planning commission for laws affecting tree planting. For more information on tree selection and planting, refer to the publication, FNR-433-W, *Tree Installation: Processes and Practices* at The Education Store (edustore.purdue.edu).

Finally, the idea of burying your utility lines may be attractive, but investigate potential complications before burying utility lines underground. Underground projects are very complex and involve more than merely taking an overhead line and placing it a few feet underground. The trenching or pulling involved with installing an underground line is extensive and deep. Trees growing the in right-of-way may have root systems that could be seriously damaged during excavation. This damage can also lessen the stability of the trees involved and may force their removal. In addition to the expense of underground installation, repairs in the event of a power failure are more difficult and costly. One other final consideration is visibility. Although overhead lines and their associated structures are unsightly, they are visible, which helps with the safety factor relative to activity around them. You can see them and are aware of their presence. Buried lines are not only unseen, but also difficult to detect and require professional locating services prior to any activity which involves underground utilities. In many ways, above-ground utilities can be considered safer.

It is important to remember that whatever you do within an easement or right-of-way affects you, your neighbors, and sometimes the community. Power outages can cause direct financial losses to many businesses, but, more importantly, the costs of repairing lines and restoring power affect all of us. Following the guidelines and suggestions outlined within this publication will help utility service providers supply safe and reliable electrical service to all customers.

Sources of Assistance

Many varying sources of technical assistance exist for property owners. The primary objective of technical assistance providers is giving sound advice with the intent to improve environmental and economic health. This assistance may be available for free, but often there is a fee to cover the time involved with assistance.

A list of technical assistance providers is given below.

Certified Arborist: Contacting a local arborist who is credentialed by the International Society of Arboriculture is a good starting point for questions about tree and utility issues. Most utility service providers hire trained arborists who are utility specialists to assist in the process.

DNR Service Foresters: Depending on where you live, there may be a DNR forester available to visit your land and answer your questions. The role of DNR foresters is to motivate and guide landowners to practice sustainable forestry.

Private Consulting Foresters: Private Consulting Foresters are independent contractors who perform technical forestry work on a fee or contract basis for work they do. Private consulting foresters provide a wide range of ecosystem management services. The American Society of Consulting Arborists is an internationally recognized resource for private consulting on trees in the urban forest.

Sources of Educational Assistance: Several sources of educational assistance can provide expertise to solve utility conflicts or assist with vegetation management issues. The University Cooperative Extension Service provides assistance to landowners through continuing education programs and workshops as well as publications. You can locate your local Extension office through the yellow pages or on the Internet. The strength of Extension is its mission to provide a balanced discussion of the issues affecting natural resources. It provides science-based educational programs and materials on sustainable land management and applies research on sustainable natural resources techniques and their impacts to natural systems and processes.

Summary

Trees and utilities can get along, as long as homeowners and utility providers cooperate. Tree owners are responsible for placement with sensitivity to public infrastructure. Utilities are responsible for helping maintain a healthy urban forest. This shared responsibility is a partnership in environmental stewardship. When the partnership fails, the victims are the trees and urban forests.

This partnership is worth pursuing. The benefits brought by trees far outweigh the challenges that exist within utility corridors. Communication and education about the vegetation management process is key to this partnership and to the conservation of our environment—and key to communication is transparency in the details. Success relies on a partnership between the consumer and the utility service provider.

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