



# VEGETATION MANAGEMENT PROGRAM

Vegetation management near power lines, fiber optic equipment, and underground utilities is critical for BTES to deliver safe and reliable services. BTES' goal is to reduce the number of outages and reduce the costs associated with restoring service while maintaining our area's natural beauty and providing for the safety of our customers and employees.

While trees enhance our landscape, trees planted in the wrong place or not properly maintained can become a concern – causing safety hazards and disruption in services. In fact, trees growing into or too close to the power lines is our largest cause of electric outages each year. Additionally, BTES (and therefore our customers) spends over \$1 million each year on vegetation management, and that's not counting the expense to restore outages caused by trees – or our customers' inconvenience from outages.

We need your help in maintaining safe and healthy spaces between trees and power lines. When planting new trees, choose the right tree for the right place. Here are four things to consider when planting trees:

- First, consider what to plant and its future size at maturity. Trees come in all shapes and sizes. Trees can grow into power lines which can cause damage and outages.
- Next, consider where to plant. To avoid future hazardous conditions, do not plant your tree too close to any of BTES' equipment.
- Third, consider spacing – especially near power lines. Give your tree room to grow to its full height and width safely.
- And always, be careful. Call 811 before you dig to locate any underground utilities.

As a property owner, you have the right and responsibility to take care of your landscape. It is the responsibility of BTES' customers to control new and existing trees and shrubbery, and placement of obstructions, to prevent interference with overhead and underground utility lines, fiber optic lines and other BTES facilities.

To ensure the reliability and safety of services and to control costs associated with emergency repairs to downed utility lines, BTES maintains the right to trim or take down vegetation according to its Vegetation Management Program.

## **EXCERPT FROM BTES RULES AND REGULATIONS (SECTION 8):**

### **CUSTOMER’S RESPONSIBILITY FOR VEGETATION, OTHER OBSTRUCTIONS, AND DAMAGES**

BTES customers shall control new and existing trees and shrubbery, and placement of obstructions, to prevent interference with overhead and underground utility lines and other BTES facilities. In the event such facilities are interfered with, BTES reserves the right to trim or remove any vegetation and/or obstructions. In the event such facilities are interfered with, impaired in operation, or damaged by the customer or by any other person when the customer’s reasonable care and surveillance could have prevented such, the customer shall indemnify BTES or any other person against death, injury, loss, or damage resulting therefrom. The customer is financially responsible for BTES’ cost of trimming or removing vegetation and/or obstructions, as well as repairing, replacing, or relocating any facilities as determined by BTES that are necessary because of said vegetation or obstructions.

Once an area around BTES’ facilities has been identified as cleared by a BTES representative, the customer will be financially responsible for any tree trimming, taking down of trees, and/or vegetation management from that point forward. As per the BTES Tree Planting Guide, no trees shall be planted within the “No Tree Planting Zone” and all vegetation should be maintained such that it does not enter into the “No Vegetation Zone.”

BTES’ Vegetation Management Program is comprised of four general functions including: Scheduled Vegetation Management, Power Outage Cutting, Customer Arranged Cutting, and New Construction Clearing.

## **SCHEDULED VEGETATION MANAGEMENT**

### **TAKING TREES DOWN**

- BTES shall place an emphasis on taking trees down in lieu of periodic maintenance and recurring vegetation management operations.
- Trees that are located within the right-of-way and/or pose a threat to BTES’ facilities may be taken down.
- BTES conducts vegetation management year-round on a planned cycle every four to five years.
- When a property owner’s tree is taken down, wood that is too large for the chipper is cut into manageable lengths and left on the property, near the base of the tree. Disposal or use of all such wood is the property owner’s responsibility.
- BTES does not remove the property owner’s tree stumps when taking down a tree. BTES will cut the stump at a height to allow removal of the stump by the customer or will cut the stump as low as possible.
- BTES may offer customers a low-growing replacement tree in exchange for the taking down of an existing tree that is obstructing or otherwise endangering BTES’ facilities. In such case, BTES shall make suitable arrangements with an approved tree nursery to provide and professionally install a Dogwood tree at a location satisfactory to both BTES and the affected property owner.

## **TRIMMING**

- The lateral pruning method and directional pruning shall be employed by BTES' contractors during cycle vegetation management operations performed on BTES' rights-of-way.
- BTES only trims or takes trees down that pose a potential hazard to primary power lines. Sometimes this means trimming or taking trees down on private property.
- Trees will be trimmed to achieve the necessary clearance in order for the customer to be able to maintain at least 10 feet of clearance. Trees may be removed to achieve 100 feet or more of clearance depending on the right-of-way, type of power line, and location. Limbs overhanging lines will be trimmed as high as possible.
- BTES and its contractors follow guidelines as set by the National Arbor Day Foundation.

## **POWER OUTAGE CUTTING**

- During a power outage, our primary responsibility is to restore power as quickly as possible.
- BTES crews will cut the property owner's vegetation in order to safely and quickly access facilities and perform work for restoration.
- BTES does not remove the property owner's brush, debris and/or trees that are cut during outage restoration. Cleanup, disposal and/or use of brush, debris and/or trees from the property owner's vegetation is the property owner's responsibility.

## **CUSTOMER ARRANGED CUTTING**

- BTES' Vegetation Management Program does not include provisions for trimming or taking trees down which interfere with low voltage service wires. However, in the interest of safety, BTES may with prior arrangement, de-energize these lines and temporarily lower them to the ground to allow the customer to conduct vegetation management.
- Once the customer has finished, BTES will reconnect the customer's service line.

## **NEW CONSTRUCTION CLEARING**

- BTES arranges with customers the path for new electric service to be installed.
- The customer is responsible for taking trees down and all vegetation management prior to the installation of services.
- The customer is required to keep the areas around BTES' overhead and underground facilities maintained and clear from future growth.

# DETAILS AND BACKGROUND INFORMATION

1. As a property owner, you have the right and responsibility to take care of your landscape. BTES customers shall control new and existing trees and shrubbery, and placement of obstructions, to prevent interference with overhead and underground utility lines, fiber optic lines and other BTES facilities. In the event such facilities are interfered with, BTES reserves the right to trim or take down any vegetation and/or obstructions. The customer is financially responsible for BTES' cost of trimming or taking down vegetation and/or obstructions, as well as repairing, replacing, or relocating any facilities as determined by BTES that are necessary because of said vegetation or obstructions.
2. Trees, shrubs, fences, large landscape rocks or other obstructions are not permitted in access areas above or around BTES' buried or ground mounted equipment. A minimum of ten (10) feet of clearance in front and a minimum of three (3) feet of clearance on each side and the back must be maintained around all pad-mounted transformers. Prior to conducting any digging, call 811 at least 48 hours before you start digging to have your underground utilities marked.
3. BTES places a greater emphasis on taking trees down rather than recurring trimming. BTES may offer customers a low-growing replacement tree in exchange for taking an existing tree down that is obstructing or otherwise endangering a BTES' facilities through its "Trade a Tree Program." BTES strongly believes that the costs associated with the Trade a Tree Program is justified compared to the benefit of reduced maintenance costs which will result from a decrease in time spent repairing downed lines and performing recurring vegetation management operations. Considering the above, BTES has taken the following steps for its Trade a Tree Program:
  - Through a competitive procurement process, BTES selects a nursery acceptable to BTES to perform the necessary tree plantings in connection with this program.
  - BTES authorizes selected employees to discuss the potential trees that will be taken down with property owners. The trees taken down will be in the best interest of the customer and BTES to help avoid costly maintenance. In general, these trees are located underneath or in close proximity to overhead circuits.
  - BTES provides the preapproved nursery with a listing of all property owners and respective locations for seasonal planting scheduling. The preapproved nursery will plant the replacement trees at locations mutually agreeable to BTES and each respective customer at certain times during the year suitable for planting.
4. During cycle vegetation management, BTES' contractors will use the lateral pruning method. The lateral pruning method is the process of removing the target branch back to the closest lateral branch or limb that is growing away from the overhead power line. In this manner, the lateral

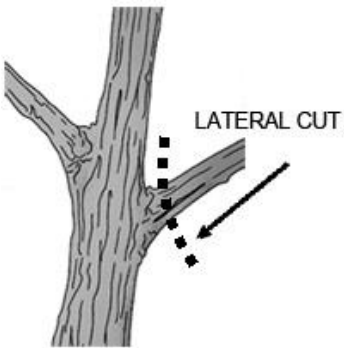
branch left on the tree will redirect the growth of the tree while reducing sprouting. Since the lateral is already attached to the branch by several growth rings, the branch is much stronger. The corresponding wound on the branch is much smaller and easier to heal, reducing the possibility of decay or disease. In short, lateral pruning has the following inherent advantages:

- Directs growth away from the overhead lines
  - Healthier than “rounding-over” which weakens the tree with randomly placed cuts and promotes rapid and vigorous sprouting around the stubs
  - Refines and improves the natural shape of the tree and reduces future pruning
  - Endorsed by national arboricultural authorities
5. If a customer, at his or her own expense, hires a professional contractor to perform the vegetation management of the property owner’s vegetation to meet BTES’ minimum requirements, the professional contractor must perform the services in accordance with the BTES Vegetation Management Program. Contractors must be certified to perform work in the vicinity of high voltage lines, be insured, and assume responsibility of any costs incurred by BTES due to contractor vegetation management, including but not limited to, repairs to BTES’ facilities.
  6. BTES does not trim or take down vegetation and/or trees located near or growing into low-voltage service lines to customers’ residences or places of business. Since energized service conductors are insulated and thus unlikely to cause an outage which would affect multiple customers, BTES concentrates its vegetation management efforts on its high voltage overhead lines, the majority of which consists of bare and exposed live parts which are insulated by air and distance. Should inadvertent contact occur between BTES’ high voltage overhead lines and surrounding trees, a power outage is likely to occur which could affect multiple BTES customers. Due to this fact and based upon BTES’ commitment to its customers in providing safe and reliable services with due consideration to matters of good economy, BTES elects not to perform vegetation management near low-voltage service wires. However, in the case of endangered low-voltage lines, BTES may with prior arrangement, lower these lines to allow the customer to perform these vegetation management operations. Upon completion by the customer, BTES will reconnect the service conductors.

## Lateral Pruning Used by BTES

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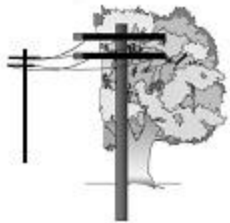
The old method of tree topping is no longer recommended by horticulturists and other professionals in the field, such as the National Arbor Day Foundation, The International Society of Arboriculture and the National Arborist Association. Tree topping or “rounding over” can lead to decay, disease, insects, fungi and may threaten the life of the tree. Weakened trees are more likely to break during wind, ice and snow storms.



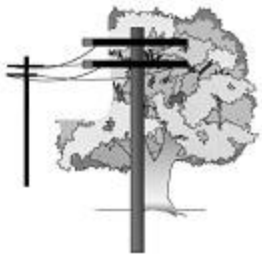
Lateral, or natural trimming, is the method used by line crews in most utilities. Lateral trimming is utilized by BTES. The name “lateral” is derived from the method of cutting branches back to natural strong points on the tree, such as the juncture of the trunk and major limbs. Re-growth occurs with lateral trimming; however, branches tend to grow away from power lines and profuse sprouting of new limbs into power lines is avoided.



“V” pruning is used for fast growing trees located directly under power lines when removal or crown reduction is not an option. No branches are left hanging over the lines with V pruning.



Side pruning involves pruning the branches growing toward the lines on one side of the tree only. Any tree that has its base located 15 feet or more away from the center line of BTES conductors will be side pruned.



“L” pruning is practiced when tree limbs cannot be pruned to a suitable lateral. This method of pruning involves pruning the branches which grow toward power lines on one side of the tree only.