

# Vegetation Management Plan 2024-2025



As an electric distribution cooperative, South Kentucky Rural Electric Cooperative Corporation (“SKRECC” or “Cooperative”) is owned by the members it serves. An essential component of that relationship is the provision of safe, reliable, and economical electrical service to those members. A mission critical function to ensuring safe and reliable service is a robust and closely managed Right of Way (“ROW”) program. The program includes first-time cutting of ROW for construction of new distribution lines as well as periodically maintaining existing ROW throughout the service territory. SKRECC cuts and clears ROWs for the safety of the public and SKRECC employees, for access to enable our crews to find and repair damaged areas more quickly, and to minimize the opportunity for vegetation such as trees, brush, and vines from contacting our power lines thereby creating hazardous energized vegetation, power blinks and outages and other unwanted events. A robust ROW program is required by virtue of accepted and customary rules within the electric utility industry, such as the National Electric Safety Code, and is further mandated by SKRECC’s regulator, the Kentucky Public Service Commission.

This Vegetation Management Plan is intended to be a general guide of important policies and procedures necessary to address the many ROW issues that are encountered on an almost daily basis. Communication of this Plan to SKRECC’s members, management and employees is essential to promote an open relationship between all stakeholders on this very important subject.

The diversity of terrain, development, and land use within our service territory requires SKRECC to employ a variety of methods and practices to provide a ROW plan that meets the needs of the Cooperative and its members. These methods include, but are not necessarily limited to, hand cutting, mechanical cutting, trimming, bush hogging and both low-volume and high-volume herbicide spraying, or a combination of some or all of these methods.

SKRECC members should understand and accept vegetation management as a necessary task to keep the lights on, but sometimes there are cases where our responsibility to trim or cut trees, remove vegetation, or spray brush within a member’s property creates tension and conflict. This situation is not unique to SKRECC, and in fact is a very common issue for a majority of electrical utilities.

The primary goals of this Vegetation Management Plan are: (1) to communicate our needs to control vegetation growth, (2) communicate our policies and procedures on how best to accomplish that task, and, (3) to balance our need of promoting system reliability with the concerns of our members that vegetation management activities be reasonable and as non-intrusive as possible.

## **Access to Member Owned Property to Conduct Vegetation Management Activities**

In order to efficiently carry out any Vegetation Management Plan an electric utility such as SKRECC must have reasonable access to the location of the vegetation to be trimmed. The vast majority of this vegetation is located under or very near SKRECC’s power lines on property which is owned by our members who, by virtue of their receiving electric service, have granted SKRECC permission to enter upon their property to complete any needed vegetation management work. This permission is given by each member when he/she enters into the original application for electric service and is also part of SKRECC’s

corporate bylaws and its tariff on file with the Kentucky Public Service Commission. The extent of vegetation management work undertaken by SKRECC at a particular location will depend upon many factors such as the extent of vegetation growth, its proximity to SKRECC's power lines, the ability of equipment and personnel to access the location, the degree such vegetation poses a risk to SKRECC's power lines, and the continued reliability of its system. SKRECC and any contractors it has engaged to assist with this work shall exercise the absolute discretion on a case-by-case basis to determine the type and extent of vegetation management practices needed at a particular location in order to mitigate the risk of unnecessary service outages.

## **ROW Cutting and Maintenance**

Many power outages are caused by vegetation growing into the power lines. Providing quality power to our members requires that we maintain our powerline ROWs. Tree removal, trimming, and cutting brush and vines is a very expensive process for SKRECC. In order to reduce costs and decrease outages thereby improving the Cooperative's reliability measures, we have implemented significant procedures in our Right of Way program. It is also our policy to not utilize the expensive procedure of grinding stumps.

South Ky RECC has committed to a six-year rotation on the vegetation management of our individual ROW circuits. Under this commitment, our entire 7,000 miles of power lines will be cut and maintained on a rotational basis, every six years, resulting in cleaner right of ways giving fewer total outages and blinks and increased accessibility in the event of need. We are also introducing modern power line trimming techniques such as directional trimming, which have been developed resulting in healthier, safer trees. However, these new techniques may make the tree look much different than if traditional techniques were employed.

## **ROW Cutting - Overhead Primary Distribution Lines**

**Overhead primary distribution lines** are the uncoated wires that bring high voltage power from the substation to the transformers where it is reduced to normal voltages for use in homes, businesses, barns, etc. This voltage is very dangerous and deadly. For safety and line integrity, cutouts and breakers sectionalize the circuit to localize any line integrity issues that may arise. The sensitivity of these interrupters is such that voltages can escape through vegetation and become a safety hazard to people and animals if there is contact with the vegetation. Dead and dying trees and limbs, along with trees blown over by winds, touching the lines and causing outages are also primary distribution line events. Adequate ROW cutting and trimming is essential in order to supply safe and reliable power.

New primary distribution line ROWs are cut according to the line type, and clean-up of this vegetation cut for these new lines is the responsibility of the property owner. A single-phase line (1 conductor on top, 1 underneath) is cut and maintained with a minimum distance of 15' on each side of the centerline, 30' total. Two or three phase lines (2 or 3 conductors on top, one underneath) are cut with a minimum distance of 22.5' on each side of the centerline with a minimum of 45' total. Double circuit lines (2 sets of 3 conductors on top, 1 underneath) are cut with the same specs as a three-phase line. Any trees, saplings,

etc., growing within these distances will need to be cleared to provide present and future line clearance and proper ground access to the lines and equipment.

As in cutting new ROW, periodic maintenance is equally important for the identical reasons. Trees fronting each side of the ROW shall be trimmed symmetrically, earth to sky, unless otherwise specified. Dead trees beyond the ROW that would strike the line in falling or could cause other trees to strike the line, shall be removed, leaning trees beyond the ROW which would strike the line in falling shall either be topped beyond the line striking level, or in appropriate cases, removed.

### **ROW Cutting - Overhead Service and Secondary Lines**

**Overhead service lines** are the coated conductors that run between the transformer pole and an outdoor light or the weather head on a structure or meter pole. These coated lines are energized at lower nominal service voltages and are less sensitive to contact from vegetation than the uncoated high voltage primary conductors. Due to this coating, limbs occasionally “bumping” these lines will not result in power quality issues, but if the limb lays on the line it may rub the protective cover leading to exposure of the conductor, and over time cause power quality issues. These service lines typically run through yards and spaces near the member being served.

**Secondary lines** are typically uncoated conductors that run for longer distances than service lines but, like service lines are energized at nominal service voltages. The service and secondary conductor ROW is trimmed generously during initial installation, but over time the open lines are affected by tree or brush growth that must be addressed by trimming and/or spraying.

New ROW for service lines or secondary lines are cut with a minimum of 5 ft. clearance on each side, which includes trimming or cutting down trees.

In maintaining service conductors, it is the policy of SKRECC to trim or cut the tree only if there is immediate danger to the service or secondary conductors and attachment points, or if there is significant contact with limbs and the service or secondary conductors. The disposition of any tree, cut or trimmed branches, and brush are the responsibility of the member.

If the tree is not an immediate danger to the line or attachment points, SKRECC will aid any tree cutter in the felling of the tree by disconnecting the service conductor to allow the tree to be cut without affecting the conductor, replacing that conductor when the tree is on the ground and it is safe for the conductor connection to be restored.

Any tree or vegetation that presents a hazard to any SKRECC service pole will be cut by SKRECC or its contractor representative and left for member clean up.

### **ROW Maintenance - Directional Trimming**

**Directional trimming** is an alternative that could be utilized on previously trimmed trees, leaving the tree healthier and will result in reduced line trimming costs. In directional trimming, only branches that grow towards the lines are trimmed. Branches that are growing out and away from the lines are left alone to

continue growth. Also, no stubs are left to foster regrowth as the trimming is at another branch or crotch. These cuts heal well and minimize sprouting and decay when properly made.

Trees that are pruned with this method do not have the familiar shape. These trees will have a “V” shape if the lines are directly overhead or an “L” shape if the lines are to one side. Though this may appear to create an unbalanced look or weak looking crown, the healthy tree will grow to correct any lack of balance compared to topping the tree. Trees cut with this method have many advantages over topping. It leaves the tree nearly as healthy as before it was trimmed and the tree will not need to be trimmed as often as there are less sprouts growing towards the lines. This method also saves the Co-op expense by reducing trimming times and reducing the number of “wounds” to the tree that heal much better. This method also works well on young trees, allowing the crown to grow while removing just those branches growing towards the lines.

Spreading crown trees benefit the most from this technique of pruning, Conifers and other strong central leader trees are more difficult to trim with this method. Directional tree trimming does not solve all of the line clearance problems, it does not work well on older trees that have had many trimmings or have central leaders like conifers and Lombardy poplars. In these situations, continued “flat topping” and tree growth regulator treatment may be used. However, tree removal and replacement, at a location that would eliminate any further issues, are preferable to the Co-op and may be very acceptable to the owner.

#### **ROW Maintenance - Flat Topping**

Topping is a traditional method of trimming that has been used to clear tree branches from the lines. It involves “flat topping” the tree at a certain level below the power lines, usually below the designated communication space reserved on the pole for telephone, cable, etc. This is a method that can be fairly quick; however, it leaves many stubs that can have a quick regrowth of the sprouts back into the lines. If this topping method is used, a growth regulator should be used to slow down that regrowth so that the tree would not require another trimming until the next circuit trimming cycle.

#### **ROW Maintenance - Tree Growth Regulators**

In order to maintain different species of trees on a circuit within a specified ROW maintenance cycle, a tree growth regulator or inhibitor may be used. Typically, these trees are yard trees that have been planted so that their growth intrudes on the ROW distances of the power lines. Tree Growth Regulator or TGR is not an herbicide. In fact, it’s use is actually beneficial for trees by decreasing the amount of woody growth. TGR also promotes an increased root density, improved drought and heat resistance, and higher tolerance to insects and diseases. The TGR is injected into the soil around the base of the tree where it is readily absorbed by the roots, and it has a low mobility in the soil to maintain the integrity of ground water.

#### **ROW Maintenance - Bush Hogging and Mowing**

Although heavy vegetation growth in our right of ways sometimes requires bush hogging or manual cutting of the growths, this is an expensive and time-consuming solution in keeping ROWs clear. However, herbicide usage in the Daniel Boone National Forrest is banned, so all right of way brush clearing and

maintenance must be completed by hand or mechanical means in those areas. Right of way mechanical or manual cutting and brush clearing has several undesirable maintenance results. Rapid regrowth often results in greater stem numbers, desirable vegetation being cut, and mechanical or hand maintenance is expensive versus herbicide use.

### **ROW Maintenance - Herbicides**

SKRECC may utilize herbicides in maintenance of its right of ways. Applying herbicides within correct time periods after cutting can decrease or even eliminate future mechanical or manual cutting. We do not use Glyphosate (Roundup) herbicide. The herbicide mixtures used are effective, versatile, and pose minimal risks to non-target species. The mixture targets undesirable species, leaving grasses and desirable plant growth while affecting woody brush and saplings. The mixture is approved for spray right up to the water's edge.

There are two methods that may be used to apply the herbicide mixture, high volume, and low volume. Time and volume of application of herbicides is important to minimize relocation of herbicides onto unintended areas.

High volume application utilizes a vehicle with a mixture tank and pump to blanket spray the complete ROW area. This method is not selective and larger volumes of mixture are used.

Low volume utilizes a smaller vehicle and tank or backpack sprayers. The smaller vehicle allows the applicator to be somewhat more selective, resulting in greater accuracy and lower spray volumes.

Backpack spraying utilizes a number of individuals with small volume backpack sprayers that travel the right of ways, spot spraying as they go. This is the most efficient method in select ability and reduced spray volumes. This method provides greatest operator control and least danger of spray being misdirected, over-sprayed, or of unwanted relocation of herbicide.

### **Power Restoration Events and Vegetation**

During unanticipated power outages SKRECC's sole focus is to restore service to its members as quickly as possible. Many of these outages are caused by vegetation either contacting or destroying the distribution lines that provide the power.

SKRECC's linemen are highly trained and experienced professionals that work very hard to restore power during these outages and it is very hard and dangerous work. Often times they find it necessary to trim or completely cut vegetation in order to complete power restoration safely and quickly.

Due to these circumstances any limbs, brush, whole or partial trees, and other vegetation trimmed or cut in SKRECC's ROW during restoration events will be left where they fell and not removed by the Cooperative.