

NOEC's Vegetation Management Plan

This document is designed to give NOEC members a brief overview of
NOEC's Vegetation Management Plan

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NOEC's Vegetation Management Plan

The primary goal of Northeast Oklahoma Electric Cooperative, INC (NOEC) is to provide safe, economical and reliable service for its members. When we do our job well, members don't even think about their power—it is simply there on demand, whenever they need it, to power their computers, appliances, and other needs.

NOEC currently manages vegetation growing along its nearly 4,000 miles of overhead primary lines on a 3-year to 7-year cycle, depending on specific attributes of the line, using principles of a systematic approach to vegetation management called "Integrated Vegetation Management" or IVM. Several different methods are used to manage the right-of-way vegetation, depending on specific site conditions and management objectives. Generally, these include manual clearing or trimming, mechanical clearing and herbicide control methods.

Achieving this goal, however, involves a diverse set of programs managed by the utility. One of the most important—and most visible—of these is the Vegetation Management Program. Vegetation management is unique among reliability programs because of its direct impact on members.

One way we are working to address this issue is to be sensitive to member's concerns and, therefore, to invest more significant effort and resources in the management of the program. As a result, NOEC's Vegetation Management program will become a much more coordinated, consistent, and professional program driven by national standards. Our commitment to this effort will include a more focused communication effort, a continuous improvement plan based on our past successes, past failures, future needs, and increased one-on-one interactions with our members.

Even the very best program, however, will face resistance when its standards conflict with the wishes of an individual member. It is important to understand that regardless of the changes we make in our program, there will always be the potential for conflict when any given member objects to our work. No Vegetation Management Program can be designed that completely eliminates impacts on each individual member.

In the end, however, NOEC has an obligation to all our members to maintain safe and reliable electric service. Vegetation management is an important component of that work, and it must continue. NOEC is continually working to improve our performance as an electric utility in the areas of reliability, fiscal responsibility, safety, member education and satisfaction. Our hope is that the changes we have made and will make in the future will help our members better understand the vegetation controlling methods of NOEC.

Safety

For decades, trees and power lines have shared the same space. Unfortunately, trees that grow near power lines can be dangerous and cause power outages. Right of way clearing is an important part of NOEC goal of delivering safe, reliable, cost-effective electric service. Trees and branches that grow into the power lines can cause outages and system disturbances especially when we have wet snow, ice or severe wind conditions. Having a vegetation management program can help reduce the number and length of outages. By keeping the trees and brush out of the right of way, emergency repairs can be completed safer and in less time. In order to maintain an adequate level of reliability and to ensure a high-standard of quality service to our members, NOEC monitors and manages vegetation growth that may create a potential problem.

Existing overhead lines and equipment are evaluated to ensure appropriate clearances are maintained. The growth cycle of trees and brush is also looked at as some faster-growing species may require more clearance than others. NOEC crews demonstrate due diligence in removing and trimming only what is necessary. In some cases a tree may not look as though it will not create a line conflict, but in the winter when loaded with snow or ice it can contact the overhead lines. Tree branches can cause blinking lights, momentary outages, or even brush fires during heavy winds when they come in contact with power lines.

Remember to always look up and look out for power lines when working outdoors. Coming into contact with energized equipment or power lines will result in serious injury or death. Stay away from power lines when you are using aluminum ladders, tree trimming equipment or other tools that extend above your head. When cutting trees or trimming trees on your property always be aware and locate any electric lines and utility equipment that may come in contact with the tree or branches being cut. If a tree falls on a power line, please keep everyone away from the tree until NOEC can respond. Trees, tree branches, vines and brush are also good conductors of electricity. Electrical shock or electrocution can occur through indirect contact when trees or tree branches have grown into or close to energized power lines or equipment. It is extremely important to keep children from climbing trees that have power lines running through them due to the risk of shock or electrocution. It is important to not have swings or any other playground equipment in trees near powerlines.

Challenges

NOEC faces a daunting task in the effort to properly manage vegetation over the entire distribution system. It is important to remember that NOEC's system continues to grow each year as new lines are built. NOEC must clear over 600 miles of overhead line annually to maintain an effective clearing cycle. It takes approximately seven years to complete a clearing cycle in the areas we serve. And once that's done, we start all over again from the beginning.

- Weather--The weather in Northeast Oklahoma presents challenges not seen in many other areas of the United States. Weather conditions cause extensive damage to the electrical system in a very short period of time. Wind coupled with wet ground conditions, causes many trees to be uprooted or blown over each year. Snow and ice buildup on trees cause many trees outside of NOEC easement to lean into power lines causing many more outages.
- Access issues created by members--Placement of fences, planted vegetation and other obstructions in the right of way or around pad mounted equipment create access issues for our clearing and line crews.
- Rapid vegetation growth--The period of time for vegetation growth is short, but conditions are perfect for rapid growth. Fertile soil coupled with abundant daylight during the summer creates perfect growing conditions.

Methods

Manual Clearing Large trees are either trimmed or cleared manually by workers with hand-carried tools to control vegetation not compatible with power lines. Aerial lift trucks are used to access the line when the line is assessable. Manual crews trim trees that are in residential areas such as back yards and non-assessable areas for buckets.

Mechanical Clearing Large mowing machines or bush hogs are used to mulch brush resulting from trimming or tree removal operations and, where applicable, to cut brush that has developed into dense thickets. In some locations large circular saws mounted on hydraulic insulated arms may be used to clear tree limbs growing to the side of power lines.

Herbicide Control Licensed and trained personnel apply EPA Environmental Protection Agency (EPA) approved herbicide to vegetation on foot and/or by utilizing off road equipment.

Conserving Habitats with Herbicide

Years of experience and study show that the careful use of herbicides is among the safest and most efficient way to control vegetation on electric rights-of-way. Repetitive mechanical clearing can impact nesting areas within the rights-of-way over time. Having a herbicide program helps limit that impact on wildlife habitat as well as help to provide safe, reliable and affordable service to our membership. NOEC uses a follow-up selective herbicide program that assures safe and easy access for our service and maintenance needs while preserving natural surroundings - including wildlife habitat - for all to enjoy.

With less competition for moisture, sunlight and nutrients, a meadow-like setting filled with beneficial grasses and wildflowers thrives. Studies show this actually enhances wildlife habitat by promoting grasses, low growing shrubs and other ground cover preferred by birds, deer and other small animals.

The products we use have undergone years of testing. The U.S. Environmental Protection Agency (EPA) registers such products for use only after determining they will not adversely affect people, animals or the environment when properly applied. The products NOEC utilizes are a formulation of the EPA-registered herbicides, which work on enzymes found only in plants, not people or animals. These herbicides enter through the leaves or bark and move within the plant to control it from the inside.

In using herbicides, NOEC is utilizing a "best management practice" accepted and promoted by the electric utility industry to provide cost-effective rights-of-way vegetation management. Considering the impact of alternative methods of brush control, such as mechanical mowing, herbicide applications result in less damage to the environment and to wildlife populations. Properly used, herbicides help preserve nesting sites and the beneficial vegetation important to wildlife, reduce soil erosion, and avoid the negative visual impact of periodic re-clearing.

Programs such as ours are endorsed by organizations such as Quality Deer Management Association, Wild Turkey Federation and Quail Unlimited.

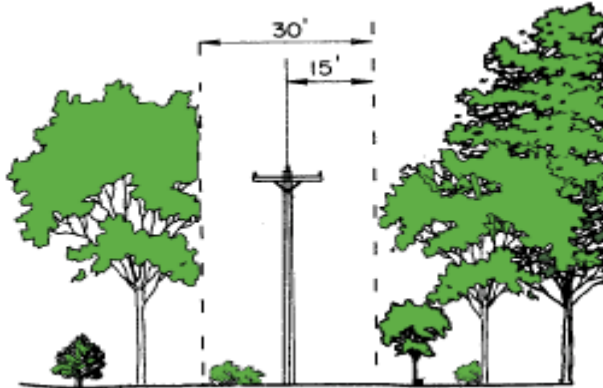
NOEC requires crews that apply herbicides to follow strict usage guidelines. Workers who apply herbicides must hold a pesticide application license from the state of Oklahoma or they must work under the direct supervision of a certified applicator. Furthermore, they must conform to all state and federal laws.

Tree cutting requests

Every year NOEC receives a high volume of tree cutting requests. NOEC removes or trims trees for safety, system reliability, and compliance with the National Electric Safety Code (NESC). A number of tree cutting requests were rejected because they did not meet the guidelines. Let us help you determine whether you should be contacting NOEC for a requested cut or whether you need to contact an independent tree service company.

Overhead

The image below is the NESC and RUS specification for vegetation management:



NOEC will trim or remove trees if:

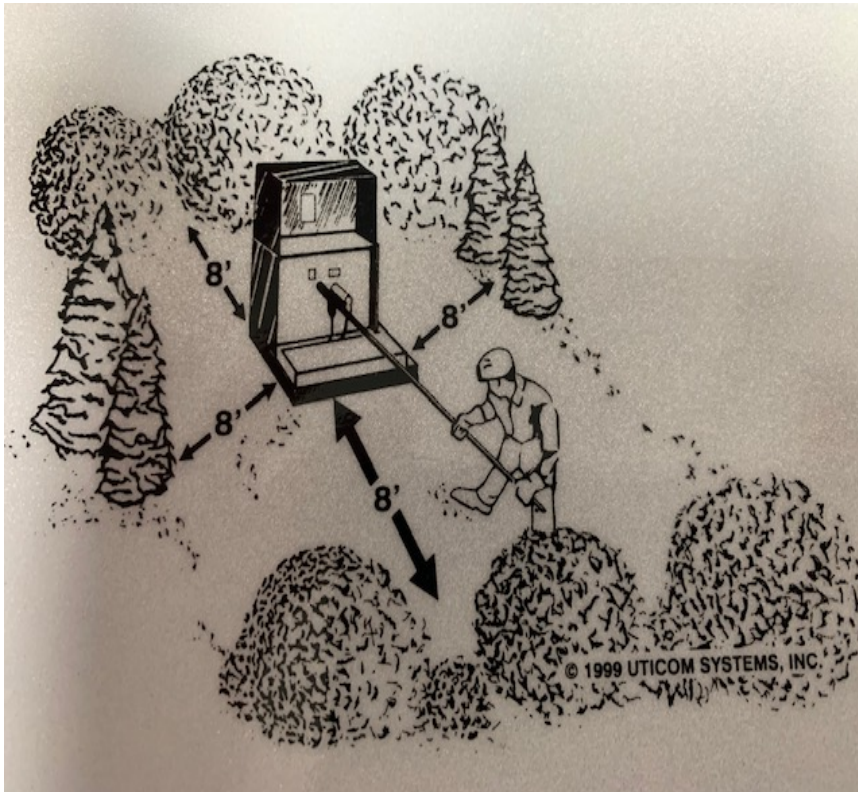
- Trees are in NOEC's 30-foot right-of-way
- Trees are, or will, negatively impact the power lines

NOEC will not trim or remove trees if:

- Trees are not affecting the power lines
- Trees are leaning away from the power lines
- Trees are over structures including homes, garages, outbuildings, campers, sewers, etc.
- Trees are not accessible by NOEC equipment - we do not climb trees for removal

NOEC recommends members contact an independent tree trimming/removal company for trees that are not NOEC's obligation to trim/remove

Underground



Remember the 8-foot rule

Neighborhoods built during the past few years receive electric service through underground power lines. NOEC line crews gain access to these lines through the green utility enclosures found near the street or in your yards. To ensure easy access, a clearance of eight feet from the utility enclosure from all sides is required.

Avoid common mistakes

Although it is tempting to landscape around ground mounted utility equipment, please remember that NOEC requires our line crews to inspect the utility equipment, and if there's an emergency or outage, line crews need immediate access.

Planting for safety

Our goal is to make it easy for you to maintain clearances around power lines ground equipment. Please call if you have questions about landscaping near utility facilities. Our staff is available to talk with you or come to your home to help you decide how to plant trees for the greatest safety. Also remember to call 811 before you do any digging to find out where the utility lines are on your property.

Removing Debris from an Emergency Situation

Removing Debris from an Emergency Situation: Sometimes a tree branch may fall onto the power lines as a result of an emergency situation—such as a storm. We'll come out and remove the branch—or in extreme cases, the entire fallen tree—but the debris disposal is the tree owner's responsibility.

Tree Cutting Removal

Tree removal is an important element of NOEC's Vegetation Management Program. Tree removal eliminates hazardous conditions, improves access to facilities and reduces future work. Tree removals will be pursued wherever feasible. NOEC will inform you that the tree needs to be removed and will remove it at no cost to you. In some cases, a voucher may be provided.

Tree Removal Candidates

- Trees that are located at homes, schools, parks, and businesses, or other areas, which children may climb easily and contact primary conductors.
- Climbable trees or trees with tree houses close to primary conductors.
- Volunteer trees which will eventually interfere with primary conductors.
- Immature trees that are not presently interfering with primary conductors, but could at their mature height.
- Dead, dying, diseased, deformed and unstable trees which have a high probability of falling and contacting primary or secondary conductors which may include trees located outside of NOEC's easement.
- Trees located within NOEC's easement.
- Trees blocking access to overhead and underground easements.

Tree Removal Conditions

- Tree removals are normally limited to fifteen feet either side of distribution conductors, excluding danger trees.
- Danger trees (outside of the right of way) will only be removed if there is a threat of the tree or limbs falling and contacting the primary conductor.
- Stumps shall be cut as close to the ground as practical in all areas.

Don't endanger yourself. Please do not attempt to trim or remove trees near power lines. Contact with a power line can cause serious injury or death. NOEC's qualified line clearance tree trimmers have specialized training to work around our power lines.

If you, or a private arborist working for you, plan to trim or remove a tree growing around a power line, call NOEC. We will have one of our tree trimmers trim the tree to provide a safe working distance.

NOEC does not trim or remove trees located around the service wire that is between your house and the pole. NOEC will de-energize your service wire and lower it to the ground so you can do the work safely.

Both of these services are provided at no cost, but we require at least five business days' notice, and additional time may be required to schedule the work.

When you feel circumstances call for tree removal, a representative will be happy to discuss arrangements with you. The service we provide often involves pruning a portion of the tree away from power lines, so a tree worker that is not qualified to work near power lines can complete the tree removal. The wood and brush is not hauled away in these situations.

If you are planning to have a tree removed that is near power lines, please call our customer service number to at **1-800-256-6405**. Whether you have questions around cutting a tree down, trimming and pruning a tree, we're here to help answer your questions and provide you helpful information to make these processes as easy and painless as possible.