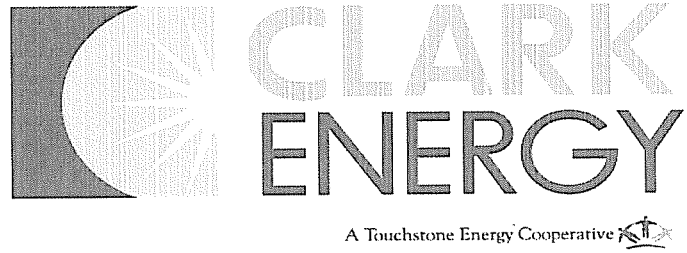


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## **Vegetation Management Plan**

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### Appendixes

#### A. RUS ROW Guide

## **1.0 Introduction**

The purpose of this document is to provide instructions and procedures to encourage the orderly, uniform and efficient furtherance of the Cooperative's objectives relative to the maintenance of vegetation on distribution rights-of-way (ROW) in such a manner as to reduce incidental ROW outages and increase worker and public safety. This Right-of-Way Procedures Manual applies to Clark Energy's employees and all contractors working on behalf of Clark Energy Cooperative.

## **2.0 Safety**

The number one goal of this document and of Clark Energy Cooperative as a company is to provide a safe work environment for our employees and contractors while protecting the public from harm in regard to vegetation management.

Cooperative employees and contractors, in matters of safety and work practices are to follow in-house company safety rules as well as all applicable federal and state laws and regulations, including OSHA regulations.

It should be expressly agreed and understood that Clark Energy Cooperative, its officers, directors and employees assume no responsibility in whole or in part, for the work practices and actions of the contractor, whether or not referred to in this manual.

### **3.0 General Overview and Methods of Clearing**

A strategic plan is essential to ensuring that a vegetation management program is effective and successful. The manner in which vegetation maintenance is completed on an electric system has direct impacts on reliability, safety, and cost effectiveness.

Electric utilities have a responsibility to maintain vegetation that threatens the safety and integrity of overhead electric facilities. This responsibility should be on the basis for an approach to property owners and public relations.

Sufficient monitoring of tree and brush crew activities is also essential to ensuring that work is completed productively and in accordance with established specifications.

Periodic reviews of program accomplishments will help to ensure that long term goals are being met cost effectively.

The implementation of proper work practices is essential to the long term success of a line clearance program. Listed below are some of the work practices for review:

#### **3.1 Scheduled Maintenance**

The re-clearing of distribution overhead lines should be done on a cycle basis as much as practical using line clearing standards in section 4.0 as a guide. A desirable situation would be to cut the entire substation area, starting with the circuit that has been cleared the longest and progressing thru all the circuits. When possible, the ROW should be trimmed and/or cut back to the original corridor to maintain as much clearance as possible but situations arise where the judgment of the ROW professional is needed in determining what these clearances will be in each situation.

## **3.2 Unscheduled Maintenance**

Situations where the need to re-clear lines on an emergency basis will arise especially where outages have occurred. These situations, sometimes called “hot spotting” will require immediate attention but reactive tree maintenance should be avoided if possible.

However, the following circumstances may warrant completion of unscheduled tree maintenance:

- A tree is an immanent threat to service reliability
- A tree is an electrical safety hazard
- A tree requires maintenance as part service restoration efforts

## **3.3 Tree Removals**

The following guidelines should influence the decision as to whether ROW trees are removed.

- Remove all tall-growing trees that are leaning in a manner that endanger critical primary lines and feeders
- Remove fast-growing and undesirable tree species in the corridor wall.
- Remove trees that present an obvious immanent hazard to Clark Energy Cooperative equipment
- Consider removing trees when the cost of removal is equal to or less than trimming.
- Remove unsound dead and dying trees with possible root failure, internal decay or a shallow root system.

### **3.4 Herbicide use**

Herbicide is widely recognized as a valuable tool to control woody brush in ROW corridors. The use of high volume foliar spraying or low volume foliar backpack method is a preferred over basal treatment due to cost.

It is desirable to leave low growing shrubs in the ROW when the presents of the brush will not interfere with the safety of workers trying to restore service. In situations where the entire corridor is covered with low growing species, a wire zone may need to be maintained to facilitate replacement of downed power lines.

### **3.5 Tree Replacements**

At times, yard trees can not be trimmed far enough back from the conductor to allow for proper clearance or fast growing species of trees under or in the power lines may make it preferable to remove and replace those trees with low growing species or trees that can be set back away from the lines so that they do not pose a particular hazard to the power lines. Consequently, Clark Energy Cooperative has established a tree replacement program to assist members with the replacement of certain trees following removal of non-compatible trees from the utility ROW.

Clark Energy Cooperative will work with homeowners to identify trees that are good candidates for replacement. After removing the tree or trees, Clark Energy Cooperative will have the tree replaced at a nominal amount with the understanding that the care of the new tree is the responsibility of the property owner.

Clark Energy Cooperative reserves the right to decide under what circumstances trees will be replaced (at the expense of Clark Energy). The replacement tree must be a low-growing variety that will not grow to a height that would require periodic pruning for line clearance, or it must be planted a sufficient distance away from power lines as to not require future line clearance pruning, if it is a tall-growing variety.

### **3.6 Customer Requests**

Clark Energy will promptly respond to legitimate requests related to tree or ROW maintenance, assign a priority level for scheduling and inform the property owner of the results of the investigation. A representative of Clark Energy or a ROW professional will decide if the work requested will benefit the overall safety and reliability of the electric system, its customers and the general public before removing or trimming any trees.

### **4.0 Line Clearing Standards**

Clark Energy Cooperative adheres to guidelines for ROW clearing of overhead distribution power lines outlined in Rural Utility Services (RUS) specifications and drawings for 14.4/24.9 Kv. Line Construction manual – section R1. A copy of the drawing is included with this document in appendix A. It is understood that this guide does not apply to all applications in the field and that special clearances may be needed at times because of field conditions.

### **5.0 Vegetation Management Re-Clearing Cycles**

Because not all distribution power line circuits are equal in need, different circuits or portions of circuits may be scheduled on different cycles based on site conditions, sensitivity of the line to interruptions caused by trees or criticality of the line.

Therefore the maintenance cycle for tree removal, tree pruning or brush control may be the same or different for a given scheduling unit.

Rural power lines that have been treated with herbicide require less ROW maintenance and can be revisited on a longer time period than urban areas or lines that travel thru subdivisions with yard trees being the primary culprit.

Professional judgment should be used in determining what these cycles will be in each situation but all circuits will have been visited in a seven year period.

## **6.0 Vegetation Management Planning Criteria**

Good planning is essential to having a successful ROW program and there are several different factors that go into the yearly planning Criteria. Listed below are some of the items taken into consideration when making those plans.

- Line patrol data
- Outages causes by ROW
- Complaints by members on momentary outages
- ROW hazard reports by in-house crews
- ROW cycles

### **6.1 Reliability Criteria and Reports**

After the end of each calendar year, outage reports derived from the outage management system to include reports by cause and indices shall be reviewed to highlight areas that may be in need of ROW clearing for the coming year.



## **6.2 Vegetation Management Plan Evaluation**

At the beginning of each calendar year, an overall evaluation of the past year's ROW program will be held with pertinent coop personnel and contractor supervision in attendance. Consideration will be given to the achievements of the past year with emphasis being placed on deriving suggestions for improvements for the coming year.