

# **COOPERATIVE LIGHT AND POWER ASSOCIATION'S VEGETATION MANAGEMENT PROGRAM**



September 2023

## Table of Contents

Definitions .....	i
BRUSH .....	i
BRUSH HOG .....	i
DANGER TREE .....	i
DISTRIBUTION LINES .....	i
HERBICIDE .....	i
HASHING DOWN .....	i
HAZARD TREE .....	i
INTEGRATED VEGETATION MANAGEMENT (IVM) .....	i
MINIMUM APPROACH DISTANCE (MAD) .....	i
OPEN WIRE SECONDARY .....	i
PRIMARY LINE .....	i
RIGHT OF WAY .....	i
SECONDARY LINE.....	i
SERVICE CONDUCTORS (TRIPLEX).....	ii
SINGLE-PHASE.....	ii
THREE-PHASE.....	ii
TREE .....	ii
TWO-PHASE .....	ii
WINDROWED.....	ii
1.1 INTRODUCTION.....	3
1.1.1 Introduction .....	3
1.2 INTEGRATED VEGETATION MANAGEMENT PROGRAM .....	8
1.2.1 Integrated Vegetation Management Program .....	8
1.3 VEGETATION MANAGEMENT WEBSITE INFORMATION .....	10
1.3.1 Vegetation Management Web Site Information .....	10
2.1 INTRODUCTION – DISTRIBUTION RIGHT OF WAY .....	11
2.1.1 Introduction .....	11
2.1.2 Purpose .....	11
2.1.3 Right of Way (ROW) Location, Widths.....	11
2.1.4 Right of Way (ROW) Encroachments .....	12
2.1.5 Leave Areas.....	12
2.1.6 Right of Way with Inactive Line .....	12
2.1.7 No Spray Areas .....	12
2.1.8 Landscaped/Manicured Areas .....	13
2.1.9 Adjacent Roadway/Driveway Areas.....	13
2.1.10 Non-Maintained Areas.....	13
2.1.11 Self-Maintained ROW.....	13
2.1.12 Wetlands-Classification and Specifications.....	19
2.1.13 Wood Removal .....	20
2.1.14 Replacement Trees .....	21
2.1.15 Stump Grinding.....	21

2.1.16	Tree Planting Guidelines .....	21
2.2	DANGER TREE ASSESSMENT .....	24
2.3	INITIAL (NEW LINE EXTENSION) RIGHT OF WAY CLEARING .....	25
2.3.1	General Overview .....	25
2.3.2	Clearing Procedures.....	25
2.3.3	Clean-up Procedures After Initial Clearing .....	25
2.4	MEMBER COMMUNICATIONS - DISTRIBUTION .....	27
2.4.1	Member Notification.....	27
2.4.2	Member Requests Tree Work .....	29
2.4.3	Member Notification Door Hanger .....	30
2.5	TYPES OF TREE PRUNING .....	33
2.5.1	General Overview .....	33
2.5.2	Crown-Reduction Pruning.....	33
2.5.3	Side Pruning .....	36
2.5.4	Under Pruning.....	40
2.5.5	Through Pruning .....	40
2.5.6	Combinations .....	40
2.6	TREE REMOVAL ON DISTRIBUTION RIGHT OF WAY.....	41
2.6.1	Reasons for Tree Removal .....	41
2.6.2	Member Notification of Tree Removals .....	41
2.6.3	Varieties To Be Cut Down .....	41
2.6.4	Conditions Under Which Trees Should Be Considered.....	41
2.6.5	Tree Removal Practice Relating to Secondary Conductors and Services.....	42
2.6.6	Identification of Trees to Be Cut Down.....	42
2.7	BRUSH CUTTING ON DISTRIBUTION RIGHT OF WAY .....	43
2.7.1	Definition of Brush .....	43
2.7.2	Low Maturing Trees .....	43
2.7.3	Brush Cutting.....	43
2.8	HERBICIDE USE ON DISTRIBUTION RIGHT OF WAY .....	44
2.8.1	Herbicide Use – General Overview .....	44
2.8.2	Cut Surface Treatments (Stump Treatments).....	44
2.8.3	Foliar Application.....	45
2.8.4	Basal Treatments.....	46
2.8.5	Communications and Member Refusal of Herbicide Application .....	47
3.1	ADAPTIVE MANAGEMENT THROUGH USE OF TECHNOLOGY .....	49
3.1.1	Record Data.....	49
3.1.2	Adaptive Management (Continuous Improvement).....	49
4.1	MINIMUM APPROACH DISTANCE (MAD) GUIDELINES.....	50
5.1	GENERAL COMMUNICATION .....	52
	DOCUMENT REVISION HISTORY .....	56
	APPENDIX.....	57

## DEFINITIONS

**BRUSH-** Any perennial woody stem, six inches or less DBH (diameter at breast height), located in an unmaintained or natural area.

**BRUSH HOG-** A type of rotary mower used to control vegetation. Typically, these mowers attach to the back of a tractor and are driven via the power take-off (PTO).

**DANGER TREE-** A tree which has the potential of adversely impacting electrical service by falling into a transmission electric line as a result of being cut, blown into, or otherwise falling, by virtue of its height and/or physical condition.

**DISTRIBUTION LINES-** Electric utility lines in the CLP service territory energized at less than 14,400 volts phase to ground and typically carried on wood poles or underground conductors.

**HERBICIDE-** A chemical product specifically formulated to be applied to and to control certain species of plants, trees, or other vegetation.

**HASHING DOWN-** A technique performed with a chain saw in which the saw operator repeatedly cuts down through a pile of brush or limbs to reduce the height of the pile. This process forces the brush closer to the ground and allows it to bio-degrade naturally in unmaintained or natural areas.

**HAZARD TREE –** A tree that is dead, structurally unsound, dying, diseased, leaning, or damaged, whether on or off the right of way, and that could strike electrical lines or distribution system equipment if it falls or is cut.

**INTEGRATED VEGETATION MANAGEMENT (IVM) –** IVM is based on the principles of integrated pest management (IPM). The primary goal of IPM is balanced use of control methods to maintain pest populations below tolerance levels. The “pest” in the case of IVM is vegetation incompatible with management goals and maintenance objectives.

**MINIMUM APPROACH DISTANCE (MAD)-** As defined by OSHA, the closest distance an employee, based on their qualifications, is permitted to approach an energized or a grounded object.

**OPEN WIRE SECONDARY-** An electrical conductor design that consists of three separate conductors carrying secondary voltages, and that are normally spaced approximately 10-12” apart. Two of the conductors are energized at 120 volts and the third conductor is a neutral. These wires may be bare- wire or in some cases have a weather-proof covering.

**PRIMARY LINE-** Electric conductor(s) that carry electricity at more than 600 volts.

**RIGHT OF WAY (ROW) –** A strip of land that is granted through an easement or other mechanism for the installation and maintenance of electric lines and equipment to provide electric service to the members of an electric utility.

**SECONDARY LINE-** Electric conductor(s) that carry electricity at less than 600 volts.

**SERVICE CONDUCTORS (TRIPLEX)** – Low voltage bundled conductor (wire) that runs from a pole to the delivery point at the meter. This bundle consists of multiple covered conductors twisted together, with a supporting bare neutral wire. These conductors typically carry less than 600 volts.

**SINGLE-PHASE-** A type of electric power line construction that contains one conductor carrying primary voltage.

**THREE-PHASE-** A type of electric power line construction that contains three conductors carrying primary voltage.

**TREE-** Any perennial woody stem greater than six inches in DBH (diameter at breast height) is classified as a tree.

**TWO-PHASE** – A type of electric power line construction that contains two conductors carrying primary voltage.

**WINDROWED** – A technique that includes moving wood and limb debris to the edge of the right of way corridor and positioning it parallel to the direction of the right of way in unmaintained areas.

## 1.1 INTRODUCTION

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### 1.1.1 Introduction

Cooperative Light & Power Association of Lake County (“CLP” or the “Cooperative”) is committed to delivering high quality service to its members while ensuring the safety, reliability, and accessibility of the power system. To provide safe, reliable, affordable energy to our members, CLP must continuously manage vegetation that could interfere with the lines and associated facilities or create a safety hazard for line workers or the general public.

The purpose of this Vegetation Management Program (VMP) is to serve as a general guide for CLP personnel and contractors engaged in supervision of vegetation management activities. If any provision of this VMP conflicts with the provisions of a specific right of way agreement, the right of way agreement shall prevail. This VMP should not be interpreted to relinquish any rights contained in the right of way agreements. This VMP is subject to change.

The following is a general overview of CLP’s VMP, and it applies to vegetation management for distribution right of way. More specific and detailed information is found in Sections 1,2,3,4, and 5.

### **Significant Points to Remember about CLP’s VMP**

- Our Cooperative has a commitment to our members and property owners to be forthright and open in our business dealings.
- Tree work is a part of our overhead and underground line construction and maintenance programs that is necessary to supply members with safe, reliable, affordable electric service with minimal interruption of service.
- The growing interest of property owners and public agencies in the care and preservation of trees is an important factor in adopting and implementing our vegetation management policies.
- Heavy annual precipitation and fast-growing vegetation bear heavily in adopting and implementing our vegetation management policies.
- Imperative to the accomplishment of all policies, procedures and specifications is the strict adherence to industry safety standards as contained in the American National Standards Institute (ANSI) Z133 requirements. In so far as practical, these specifications will be considered the standard for all tree work on the Cooperative’s distribution system. These specifications are aligned with the industry-accepted tree pruning standards as prescribed in the ANSI A-300 Standard (Tree, Shrub, and Other Woody Plant Management-Standard Practices (Pruning)).<sup>1</sup>

- All pruning shall be done in accordance with established, sound principles of the care and preservation of trees. Pruning techniques shall balance current tree health with clearance needed for power lines.

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<sup>1</sup> To learn more about the ANSI Standards, please visit [www.tcia.org](http://www.tcia.org). The standards themselves are not included herein due to copyright infringement concerns.

## **Member Contact – General Overview**

- The intent of the notification process is to provide multiple points of contact using multiple methods to diminish miscommunication or non-communication. Our processes are designed to promote discussions with property owners before a tree is cut down.
- Member notifications shall be made in accordance with the guidelines outlined in Section 2.4.1.
- Exceptions to the member notifications include outage restoral, emergency, or danger/hazard tree work.

## **Wood & Debris Removal – General Overview**

- Landscaped/Manicured Areas: In landscaped and manicured/lawn areas, brush will be chipped. When feasible and agreed to by the property owner and CLP, this brush may be blown into an area either within the right of way or adjacent to the right of way corridor. Larger wood is the property of the owner, and contractors will work with the property owner to delimb, chip limbs, and cut and stack the wood into manageable lengths.
- Non-Maintained Areas: In non-maintained areas, trees and limbs will be cut, left on site, and windrowed along the edge of the right of way. Brush and limbs can be brush hogged when the terrain or site allows. If the terrain does not allow mechanized equipment, the trees and limbs will be manually hashed down and left to bio-degrade naturally.
- In Adjacent Roadside/Driveway Areas: Brush and limbs will be chipped, or brush hogged when the terrain or site allows. If the terrain does not allow mechanized equipment, the trees and limbs will be manually hashed down and left to bio-degrade naturally. Larger wood is the property of the owner, and contractors will work with the property owner to cut the wood into manageable lengths around 8 feet in length.
- The Cooperative does not remove or grind stumps in distribution right of way. All stumps will be cut as close to the ground as possible.
- The Cooperative is not responsible for clearing or removing wood or debris after a storm or other act of nature.

- The Cooperative is not responsible for delimbing, sectionalizing, or removing wood or debris from a member request for tree work or danger/hazard tree work.
- Deadfall wood or brush may not be chipped due to possible damage to chipping equipment.

## **Herbicide Use – General Overview**

- From an environmental, scientific, and economic perspective, our Cooperative considers the integral and judicious use of herbicides as a viable tool in managing vegetation along our right of ways. The Cooperative should have no reservations about explaining herbicide use to our members.
- Herbicide use on distribution and transmission right of way is an effective tool in controlling brush. Usage shall be accomplished in a very conscientious manner, and users familiar with the product labels, uses, rates, and precautions.
- CLP requires that herbicide application crews be led by licensed pesticide applicators and follow all applicable state and federal laws.
- CLP has knowledgeable, trained, and conscientious individuals applying herbicides.
- The application of herbicides offers the greatest opportunity for improving our right of way by eliminating unwanted and non-compatible vegetation.
- The property owner has the right to request his/her property be considered a “no spray” area as outlined in Section 2.8.5.

## **Communication Materials and Resources**

- The company website ([www.clpower.com](http://www.clpower.com)) shall include CLP’s vegetation management program and a map of the right of way clearing areas scheduled for vegetation management (including herbicide) unless State or Federal owned. Some variation may occur based on emergent situations or budgetary changes and will be made on an as needed basis.
- Most printed materials used in the member notification process are included in Section 5.1.
- On an annual basis, CLP provides a newsletter article to members explaining its herbicide program and the methods used on its right of way. A copy of the newsletter article is shown in Section 2.4.3.

## **Member Inquiries**

- Any door hanger left with the member/property owner or on the premises regarding right of way maintenance and the type of work to be performed shall include the name and telephone



number of the CLP Representative and/or authorized contractor responsible for responding to member inquiries.

- Inquiries of a general nature regarding requested vegetation maintenance activities should be directed through CLP at 218-834-2226.
- Members may meet with CLP staff or available contractors at the CLP Annual Meeting each year to learn about the IVM program or ask questions.

### **Technical Standards Reference (Applicable or Current Version)**

The following documents are used as references in developing the Right of Way Policies, Procedures and Specifications:

**NESC-** National Electrical Safety Code- Section 218 entitled “Tree Trimming”.

This code gives general guidance on maintaining clearances between electrical conductors and vegetation.

**OSHA 1910.269-** Occupational Safety and Health Administration’s rule for Electric Power Generation, Transmission, and Distribution ([www.OSHA.gov](http://www.OSHA.gov)).

This Standard is applicable to all aspects of work around energized conductors, including vegetation management. It includes such issues as training, safety, emergency procedures, and knowledge of voltages, approach distances, use of insulated tools, job briefings, personal protection and equipment use.

**ANSI Z133** Safety Standard- American National Standards Institute

This voluntary standard for Safety Requirements for Arboricultural Operations includes guidelines for general tree care operations as well as those operations which occur in close proximity to electrical conductors and facilities.

**ANSI A300 Pruning Standard-** American National Standards Institute

This is a voluntary standard for Tree Care Operations for the maintenance of trees, shrubs, and other woody plants.

**The National Pesticide Applicator Certification Core Manual – (<https://www.epa.gov>)**

**All Applicable Minnesota State and Federal Laws**

**RUS Specification R-1**

**CLP Board Policy II-13 Integrated Vegetation Management**

## **1.2 INTEGRATED VEGETATION MANAGEMENT PROGRAM**

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### **1.2.1 Integrated Vegetation Management Program**

The primary objective of the CLP Integrated Vegetation Management Program is to control the growth of vegetation along the electric lines so that the Cooperative can provide safe, reliable, affordable energy services to our members. This is accomplished by defining a cycle, using qualified personnel, contractors, and/or foresters, to monitor the condition of the utility right of way and by initiating various vegetation control practices to reduce, manage or eliminate undesirable growth. This approach is called an Integrated Vegetation Management (IVM) Program. The intended goals for the IVM Program are as follows:

- Accommodate the intended use of the site (delivery of electricity).
- Advance environmental stewardship and sustainability, including restoring or enhancing ecological benefits.
- Comply with applicable laws and regulations.
- Control incompatible species.
- Ensure operational flexibility.
- Maintain site security.
- Optimize maintenance cost.
- Promote public and line worker safety.
- Protect cultural sites.
- Protect, enhance, and propagate compatible species.

CLP utilizes an IVM Program for all aspects of its management of vegetation on distribution right of way. IVM Programs incorporate manual, mechanical, and chemical maintenance to comprehensively manage the vegetation that is incompatible with the right of way use. Depending on vegetation species, densities, locations, and sizes, the most appropriate tool will be utilized for the given situation and circumstances. IVM Programs are designed to incorporate management tools to provide long term, environmentally sound right of way.

The consistent implementation of industry-accepted vegetation management practices greatly reduces the risk and likelihood of tree and power line conflicts, as well as service interruptions, and allows for the full utilization of the electric distribution system.

### **Three-Step Right of Way Corridor Maintenance Cycle**

STEP 1: Trees and brush are removed from the corridor.

STEP 2: Selective spot treatment of an EPA-approved biodegradable herbicide where there are unwanted trees, brush, and noxious weeds. This includes poison ivy around the utility poles and trees and brush that will eventually interfere with electrical service, reliability, or

accessibility. This does not include areas near gardens or mowed areas.

STEP 3: A review of any areas that may have been missed in prior herbicide treatments will follow 1-2 years after step two. Subsequent maintenance cycles follow in 6-8 year increments, which will be less intensive due to the decreased amount of trees and brush.

## **1.3 VEGETATION MANAGEMENT WEBSITE INFORMATION**

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### **1.3.1 Vegetation Management Web Site Information**

The following information can be found on the CLP website at [www.clpower.com](http://www.clpower.com)

- Integrated Vegetation Management (IVM) Program
- Encroachment Guidelines Quick Reference Guide
- Maintenance and Vegetation Management Quick Reference Guide
- Tree Debris and Cleanup Quick Reference Guide
- Planting Guidelines Quick Reference Guide
- ROW Frequently Asked Questions Quick Reference Guide
- Maps (prior to scheduled work)

## **2.1 INTRODUCTION – DISTRIBUTION RIGHT OF WAY**

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### **2.1.1 Introduction**

Managing vegetation, which includes pruning or cutting down trees and the use of herbicides, along CLP's right of way is a part of the distribution overhead line construction and maintenance programs that is necessary to supply members safe and reliable electric service with minimum interruption. The large number of trees and tree species prevailing in the CLP service territory directly influences the design, construction, and operation of our overhead and underground electric distribution system. The growing interest of property owners and public agencies in the care and preservation of trees is an important consideration in our overhead line and maintenance programs, as well. Heavy annual precipitation and fast-growing vegetation are other factors directly affecting the general conditions. Because of these conditions, a comprehensive procedure to guide vegetation management activities is desirable.

### **2.1.2 Purpose**

The purpose of this section is to clearly set forth policies, procedures, and specifications to guide CLP personnel and contractors engaged in supervising line clearance work along its overhead distribution system. Application of these specifications still allows the Cooperative reasonable flexibility to adequately meet a wide range of conditions. Even though the solution may vary for the many types of line clearance field situations encountered, certain fundamental vegetation management principles remain the same. Imperative to the accomplishment of all policies, procedures and specifications stated herein, is the strict adherence to industry safety standards as contained in the ANSI Z133 requirements.

In so far as practical, these specifications will be considered the standard for all vegetation management activities on the Cooperative's distribution system. They are aligned with the industry accepted tree pruning standards as prescribed in the ANSI A- 300 standard (Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning)).

### **2.1.3 Right of Way (ROW) Location, Widths**

Most utility line easements specify the location and width of the ROW. Some older easements were frequently "blanket easements" allowing a utility to cross property whenever it needed. Due to the many versions of easements over the years, it is important for landowners or prospective purchasers to review the specific terms of an easement. This review should provide guidance about permitted uses within the boundaries of a ROW easement. The National Electric Safety Code (NESC) specifies minimum horizontal and vertical clearance requirements for overhead and underground lines. These clearance requirements must be complied with. Specific easement agreements may require more clearance.

The following chart lists typical ROW widths for CLP Distribution lines:

Type of Line	Typical ROW Width
Secondary Overhead Distribution	10 ft. (5 feet each side of center)
Primary and Secondary Underground Distribution	15 ft. (7.5 feet each side of center)
Primary Single Phase Overhead Distribution	40 ft. (20 feet each side of center)
Primary Three Phase Overhead Distribution	50 ft. (25 feet each side of center)

#### 2.1.4 Right of Way (ROW) Encroachments

Any use of the property that is not permitted by the terms of the easement. CLP regularly patrols its distribution system and can require a landowner/member to remove an encroachment at the owner's expense; however, some types of encroachments are allowed with proper approval from CLP. If an unapproved encroachment is discovered during or after installation, CLP will request that it be stopped and removed. Should a landowner/member refuse to cooperate, CLP may seek legal recourse.

#### 2.1.5 Leave Areas

"Leave" areas documented and approved by CLP, its contractors, and/or foresters, will be exception areas where trees will be allowed to remain within the right of way. "Leave areas" are defined as areas where fully mature trees will never interfere with the safe and reliable operation of the line. Leave areas will in most cases be located on steep terrains where electrical conductors are spanning across hills and valleys. Some locations could be under an ordinance requirement for road buffers on federal lands or state parks, etc. Line projects with known leave areas will be documented.

#### 2.1.6 Right of Way with Inactive Line (Non-Consumer)

All right of way on which inactive lines are located will typically be maintained as necessary to protect our legal rights.

#### 2.1.7 No Spray Areas

A "no spray" area is defined as an area within the right of way for which the property owner and CLP have executed a formal agreement (as outlined in Board Policy II-13 Integrated Vegetation Management) not to apply herbicides and is clearly identified in the application, opt-out lists and/or workflow management/mapping software by parcel-id (provided by property owner requesting such variance). In no spray areas, there are typically two options for maintaining the brush:

1. Brush hog/mowing
2. Hand cutting

Hand cut brush shall not inhibit CLP or its contractors, the ability to access the right of way to perform routine maintenance of the line trucks, equipment and/or ground crews walking within the right of way easement. This brush shall not impose any safety hazards for CLP field performers and/or contractors. Brush shall not be left in streams, or on access roads. When cutting down trees or brush from within the corridor by hand cutting, all stumps will be cut as close as possible to the ground. Brush shall be cut as close and parallel as possible to the ground surface.

#### 2.1.8 Landscaped/Manicured Area

A “landscaped/manicured” area is defined as an area of land made attractive and desirable by the use of any or all of the following: grass, trees, shrubs, ornamental plantings, fences, walls and associated earthworks; however, it shall not include areas occupied by garbage containers, storage, parking lots or driveways.

#### 2.1.9 Adjacent Roadway/Driveway Area

An “adjacent roadway/driveway” area is defined as the ROW directly adjacent to an existing roadway or driveway in close proximity to a member’s residence or structure. This area, generally, could be considered a higher visibility area but is not considered a landscaped/manicured area. A driveway or roadway could be considered adjacent if within 15 feet of the edge of the ROW or crosses a driveway within those parameters.

#### 2.1.10 Non-Maintained Area

A “non-maintained” area is defined as the ROW that is not considered a landscaped/manicured or adjacent roadway/driveway area. It generally includes ROW that is rural and not near any residential dwellings. It may be located on the back edges of a property, in heavily wooded areas, parks, state or federal land, away from roadways, driveways or between residences on a highway right of way.

#### 2.1.11 Self-Maintained ROW

It is the position of CLP that a member may choose to keep the ROW clear of any obstructions via means of self-maintenance provided the ROW has been initially cleared as part of an IVM cycle. Once cycled, the member may self-maintain the ROW as a landscaped/manicured area, or non-maintained area. The ROW will remain part of the IVM cycle, however, if properly self-maintained, there will be no need for additional work to be performed. If self-maintenance was deemed inadequate, or a safety issue is identified, the ROW will be cleared as set forth in this IVM program. The member may additionally request for herbicide refusal/variance as described in Section 2.8.5. In no event shall CLP or its contractors be prevented from accessing, clearing (brush hog/mowing or hand cutting methods), or otherwise discouraged from proper maintenance of the ROW as deemed necessary by CLP or its contracted forester. The self-maintained ROW will need to comply with the IVM standards set forth in this document. This includes maintaining the ROW width to the specifications in Sections 2.1.3 (ROW Locations, Widths) and 2.1.16 (Tree Planting



Guidelines). Examples of acceptable and non-acceptable standards are shown in the pictures below. It is not the position of CLP to train the member on clearing methods, or otherwise audit the self-maintained ROW outside of the regular IVM cycle. The member will be notified ahead of any work to be performed as outlined in Section 2.4. Since self-maintained ROW is not formally recorded, and no variance is required, all member notifications will follow the guidelines set forth in Section 2.1.11. Therefore, if specifically notified (excluding blanket generic area notifications), it means that the ROW was not maintained in a sufficient manner per the guidelines outlined in the IVM program and on the company website and will be rectified, on schedule, per the notification. Should the member choose to do the remediation work themselves, it would need to be done by the date communicated to the member. **In no event shall the member be allowed to perform any work (pruning, cutting) if the vegetation is within the Minimum Approach Distance (MAD) of 10' to an energized conductor.** In no event shall the schedule of the maintenance of the ROW be delayed.

#### **Example Photos of Standards and Expected Remediation for Self-Maintained ROW:**

**Green Standard – No Remediation Required** – Remediation: None required. CLP vegetation maintenance would be skipped in these areas.

The photos below show examples of what an acceptable green standard of a self-maintained ROW should look like. In these examples, no remediation work would be needed on the next IVM cycle. There is no dense or high growing brush, no overhang, no out of ROW leaning or danger trees, no trees in the clear zone, and the width of the ROW has been maintained to the correct width. In some cases, the member has been mowing the grass. **In no event shall the member be allowed to perform any work (pruning, cutting) if the vegetation is within the Minimum Approach Distance (MAD) of 10' to an energized conductor.**





**Yellow Standard – Minor-Mid Remediation Required** – Remediation: Minor to mid severity of work to be performed on the next IVM cycle by CLP, its contractors, or the member.

The photos below show examples of what a yellow standard of a self-maintained ROW looks like. Without any remediation, this yellow standard is considered sub-standard, and the member can expect work to be done on the next IVM cycle by CLP or its contractors. In this case, since there is no immediate threat to the electric system or public safety, the members may still remedy the situation on their own. **In no event shall the member be allowed to perform any work (pruning, cutting) if the vegetation is within the Minimum Approach Distance (MAD) of 10' to an energized conductor.**

In these examples highlighted in red, the work would include small tree removal, brush hogging or brush removal, removal of dead or danger trees, and removal of larger trees within ROW. Bucket trucks or other equipment may be required for side cutting/pruning. The brush may or may not be removed on the next cycle depending on the conditions at that time of year. For example, if there was too much water or soft ground present. After the brush is brush hogged, in the following years, herbicide application would likely follow to prevent the undesirable stimulated rapid regrowth.







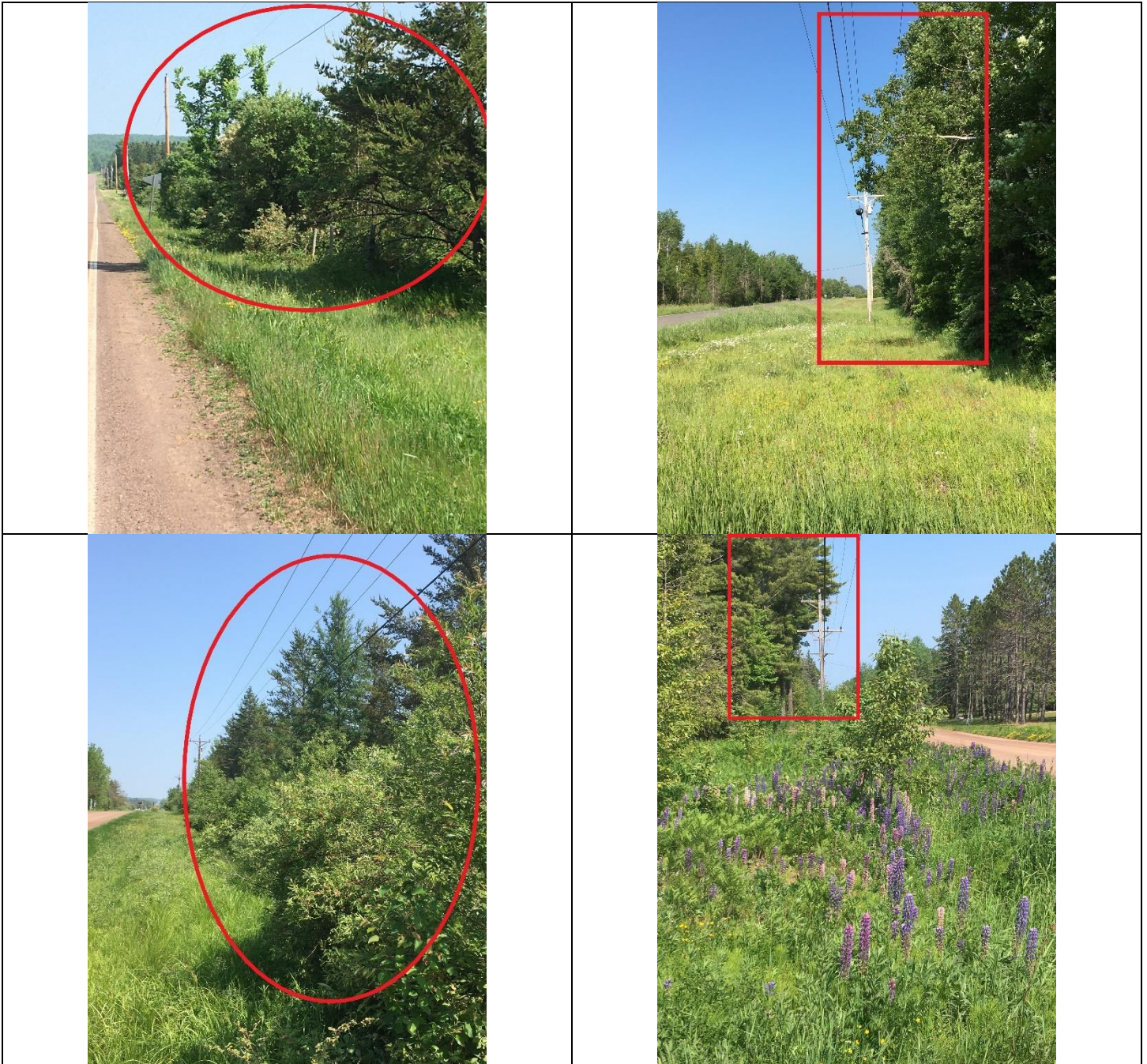


**Red Standard – Severe Remediation Required** – Remediation: High severity of work is to be performed on the next IVM cycle by CLP or its professional contractors. The members will NOT be allowed to self-remedy the situation as it is considered a severe safety issue.

The photos below show examples of what a red standard of a self-maintained ROW looks like. Without any remediation, this red standard is considered extremely sub-standard, and the member can expect work to be done on the next IVM cycle by CLP or its contractors. In this case, since there is a threat to the electric system or public safety, the member is prohibited from remedying the situation on their own. **In no event shall the member be allowed to perform any work (pruning, cutting) if the vegetation is within the Minimum Approach Distance (MAD) of 10' to an energized conductor.**

In these examples highlighted in red, the work would include small tree removal, brush hogging or brush removal, removal of dead or danger trees, and removal of larger trees within ROW. Bucket trucks or other equipment may be required. The brush may or may not be removed on the next cycle depending on the conditions at that time of year. For example, if there was too much water or soft ground present. After the brush is brush hogged, in the following years, herbicide application would likely follow to prevent the undesirable stimulated rapid regrowth.





## 2.1.12 Wetlands-Classification and Specifications

The United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) define wetlands as follows:

Those areas that are inundated or saturated by surface or ground water at a

frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wetlands are areas that are covered by water or have waterlogged soils for long periods during the growing season. Plants growing in wetlands are capable of living in saturated soil conditions for at least part of the growing season. Wetlands such as swamps and marshes are often obvious, but some wetlands are not easily recognized, often because they are dry during part of the year or “they just don’t look very wet” from the roadside.

The CLP vegetation management program for “wetland area” complies with the regulations and policies identified by the EPA and USACE.

CLP’s Best Management Practice (BMP) for wetlands is to protect wetland areas and remove only the vegetation that would impact the safe and reliable operation of the distribution system and electrical wires crossing the wetland. CLP contractors will be required to conduct work in compliance with the BMPs for wetlands.

Trees and brush shall be felled such that they do not disturb or damage other surrounding vegetation. Vegetation and debris shall not impact or disturb the flow of water in the stream bed.

#### 2.1.13 Wood Removal

CLP’s right of way agreements do not state that the wood belongs to CLP. The wood belongs to the property owner, CLP’s policy is to leave the wood for the property owner.

**Landscaped/Manicured Areas:** In landscaped and manicured/lawn areas, brush will be chipped. When feasible and agreed to by the property owner and CLP, this brush may be blown into an area either within the right of way or adjacent to the right of way corridor. Larger wood is the property of the owner, and contractors will work with the property owner to delimb, chip limbs, and cut and stack the wood into manageable lengths.

**Non-Maintained Areas:** In non-maintained areas, trees and limbs will be cut, left on site, and windrowed along the edge of the right of way. Brush and limbs can be brush hogged when the terrain or site allows. If the terrain does not allow mechanized equipment, the trees and limbs will be manually hashed down and left to bio-degrade naturally.

**Adjacent Roadway/Driveway Areas:** brush and limbs will be chipped, or brush hogged when the terrain or site allows. If the terrain does not allow mechanized equipment, the trees and limbs will be manually hashed down and left to bio-degrade naturally. Larger wood is the property of the owner, and contractors will work with the property owner to cut the wood into manageable lengths around 8 feet in length.

The Cooperative is not responsible for clearing or removing wood or debris after a storm or other act of nature.

The Cooperative is not responsible for delimbing, sectionalizing, or removing wood or debris

from a member request for tree work or danger/hazard tree work.

**NOTE:** Deadfall wood or brush may not be chipped due to possible damage to chipping equipment.

#### 2.1.14 Replacement Trees

CLP does not provide replacement trees to the property owner on whose property it performs maintenance in accordance with the right of way agreement.

#### 2.1.15 Stump Grinding

CLP does not grind the stumps from trees cut down during right of way maintenance activities. The contractor will cut the tree as close to the ground as possible.

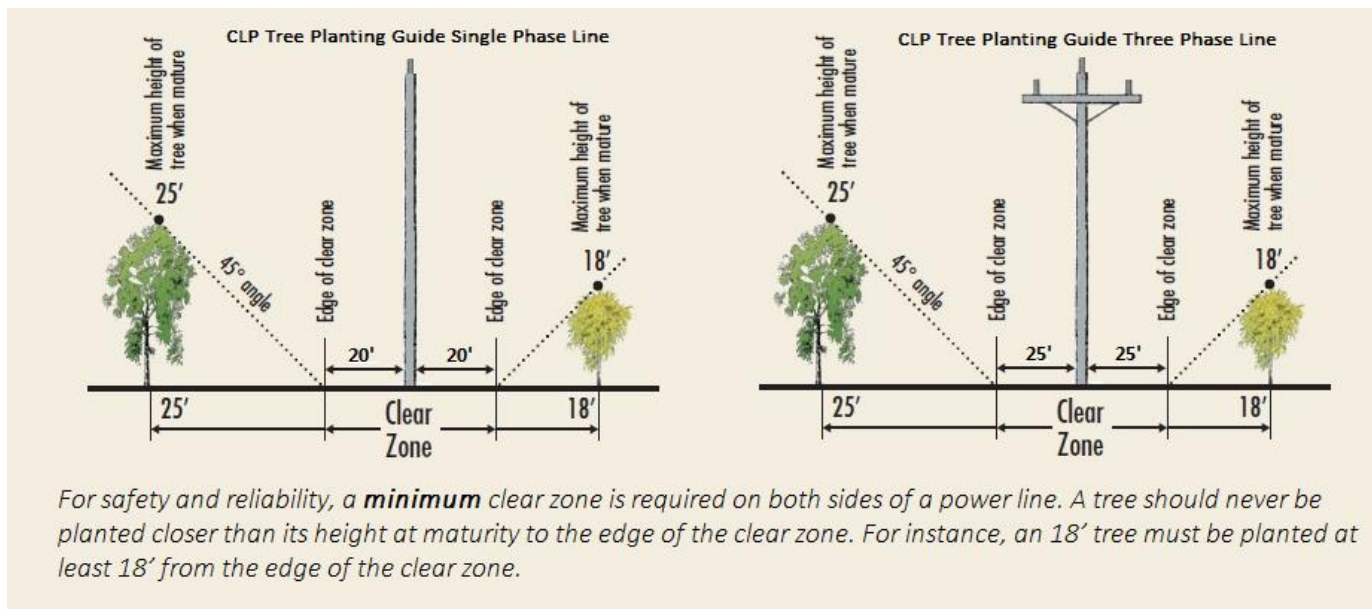
#### 2.1.16 Tree Planting Guidelines

##### Where to Plant

The right tree planted in the right location provides environmental, economic, and aesthetic benefits for the property owner and the community. To maintain the beauty of your landscaping, public safety, and reliability of electric service, it's important to ensure that any tree planting does not interfere with any overhead or underground utility lines.





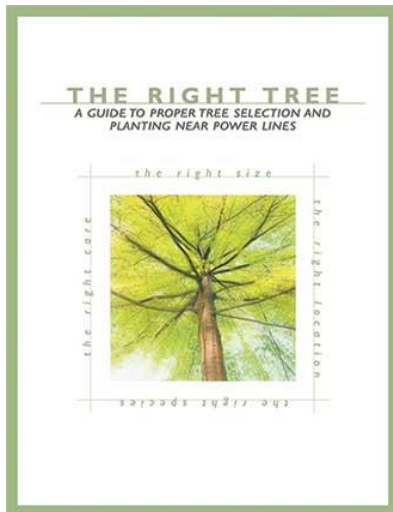


For planting, to ensure that a planted tree will not be cut, a minimum 25-foot clear zone (No Tree Zone) is required on both sides of the utility pole (50 feet total width) to accommodate CLP's widest ROW as shown in the illustration above. Outside of the minimum clear zone, the tree height and width at maturity must be considered before digging the planting hole to ensure the tree will not grow into the power line right of way widths outlined in Section 2.1.3. Some tree planting guidelines are outlined in *The Right Tree: A Guide to Proper Tree Selection and Planting Near Power Lines*.

**DISCLAIMER:** Please be aware that right of way width varies from utility to utility and varies depending on the type of line as outlined in Section 2.1.3. Because of this, be advised that the 15' minimum clear zone listed in *The Right Tree* guide is not sufficient for a 5' or less height tree in a Primary Single Phase Overhead ROW or a 10' or less height tree in a Primary Three Phase Overhead ROW. In any case, to ensure that a planted tree will not be cut, a minimum 25-foot clear zone (No Tree Zone) is required on both sides of the utility pole (50 feet total width) to accommodate CLP's widest ROW as shown in the illustration above. Because there is valuable information in *The Right Tree* guide, the Cooperative decided to post this disclaimer and attach that guide in the Appendix instead of not attaching the guide.

Call Before You Dig state and federal laws require marking of all underground utilities before any excavation. Regardless of where you are planting, call Gopher State One Call to request a locate several days before digging. Call **811** or **1-800-252-1166**. Facility marks are valid for 14 calendar days.

## The Right Tree



*The Right Tree: A Guide to Proper Tree Selection and Planting Near Power Lines* is an informative booklet covering tree size, location, species, and care. It includes expert information from the University of Minnesota Extension and the Minnesota Landscape Arboretum. Download a copy of *The Right Tree* from our website at or refer to the Appendix.

Certain species of trees, both deciduous and coniferous, are better for planting near power lines, some of which can be found in both shrub and tree form. Nursery professionals can help determine the best options, which may include:

American Smoketree	Nannyberry Viburnum
Cherry – Pin or Sargent	Panicle Hydrangea
Dogwood – Pagoda or Grey	Plum – Princess Kay or American
Flowering Crabapple	Redbud
Lilac – Japanese, Peking, or Dwarf Korean	Serviceberry – Apple or Allegheny
Magnolia – Star or Loebner	White Fringe Tree

### **Help Our Butterflies, Hummingbirds, Honeybees, and Bats**

Plant flowering shrubs, wildflowers, and native grasses to give pollinators food and nesting sites so they can transfer pollen to create fruits, nuts, and flowers.

## 2.2 DANGER TREE ASSESSMENT

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A danger or hazardous tree is defined as a tree having one or more of the following characteristics, which may conflict with the conductors or structures (poles and hardware) if such tree(s) fell in the direction of or otherwise endangers the CLP line. No danger or hazardous tree should be cut or removed if it cannot make contact with the conductors or structures when falling.

- Dead or dying – all dead or dying trees along, or outside the CLP right of way. Removal depends on height of tree and direction of the lean.
- Leaning trees – trees that have such a lean toward the right of way that they cannot be trimmed without removing the tops and slanting the tree back. Removal depends on height and species of the tree and direction of the lean.
- Cankers and canker-rots – present as a localized area of dead bark and cambium on trees on the bark of trunk around the circumference of the tree and often are visible on the canker face. In some cases, canker-rots are internal and not visible.
- Animal and mechanical damage – present in the main trunk and broken branches and must show visible signs of decay with evidence of wounds.
- Widowmakers – a detached or broken limb, trunk, or treetop. The name indicates that such objects can fall and injure or kill workers thus “making widows”.

## **2.3 INITIAL (NEW LINE EXTENSION) RIGHT OF WAY CLEARING**

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### **2.3.1 General Overview**

Although the initial right of way clearing is the responsibility of the member and/or the member's contractors, from time to time the member may pay CLP additional fees to have the initial clearing performed. Road jobs, primary line relocations, overhead to underground conversions, substation expansions are just some examples of where CLP or its authorized contractors may perform the clearing themselves. Therefore, it may not necessarily require line clearance crews to perform this work assignment. The Staking Engineer/Operation Manager shall be responsible for identifying the location of the proposed line and determining the most economical and practical manner to accomplish the work. Cooperative and contractor construction crews shall be equipped with a chain saw in their normal tool complement and shall be assigned the initial clearing on specific construction projects when designated by the Staking Engineer/Operation Manager.

See Section 2.1.3 for a detailed description of Right of Way Locations, Widths.

### **2.3.2 Clearing Procedures**

Where practical, before cutting and felling, the outside boundaries of a right of way may be measured and marked from the center line with temporary markers to guide crews. In felling and clearing, the following points should be observed:

- Never cut where rights to do so are uncertain.
- A strip free of all wood, brush, and stumps roughly two (2) inches high should be left along the center line for easy movement and installation of line construction materials.
- In many types of forest growth, it is often best to cut underbrush and small trees in advance of tree felling. An excellent method to economically accomplish this is to use mechanical brush cutting equipment. Trees should be felled parallel to, rather than away from, the right of way strip whenever practical to avoid extra handling of logs and tops. Felling of trees in crisscrossing patterns should be avoided.
- Stumps should be cut low to the ground – but not so low as to damage valuable sawing equipment.
- Avoid damage to standing trees off the right of way swath.

### **2.3.3 Clean-up Procedures After Initial Clearing**

Below are the procedures to be followed after initial clearing:

- CLP generally does not remove the brush or debris from the property of the property owner requesting new service. The Staking Engineer/Operation Manager will communicate with the member that this work will be cleaned up in accordance with our 'non-maintained' area practices for routine maintenance work. Any additional clean-up beyond this could be determined to be additional billable expenses to the property owner or member requesting CLP to clear for the new service.
- In Non-Maintained Areas, trees and limbs will be cut, left on site, and windrowed along the edge of the right of way. Brush and limbs can be brush hogged when the terrain or site allows. If the terrain does not allow mechanized equipment, the trees and limbs will be manually hashed down and left to bio-degrade naturally.
- In Landscaped/Maintained Areas, the brush will be chipped. When feasible and agreed to by the property owner and CLP, this brush may be blown into an area either within the right of way or adjacent to the right of way corridor. Larger wood is the property of the owner, and contractors will work with the property owner to delimb, chip limbs, and cut and stack the wood into manageable lengths.
  - **NOTE:** Deadfall wood or brush may not be chipped due to possible damage to chipping equipment.

## **2.4 MEMBER COMMUNICATIONS – DISTRIBUTION**

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To maintain adequate distribution right of way and service reliability and to maintain proper respect for individuals' property, as well as to minimize tree-related damage claims against the Cooperative, the following basic operating practices should be followed:

### **2.4.1 Member Notification**

The intent of the notification process is to provide multiple points of contact using multiple methods to diminish miscommunication or non-communication. Our processes are designed to promote discussions with property owners before a tree is cut down.

Personal contact by contractor supervision is the preferred standard method for notifying members of upcoming maintenance activities. If personal contact is made, the nature and extent of the work should be explained to the property owner. Talking with members personally facilitates CLP's ability to clearly establish its intent and allows the Cooperative to gain an understanding of the property owner's expectations, which may enable it to provide flexibility where appropriate and warranted.

### **Communication Methods and What to Expect**

A minimum of 3 of the following communication methods (narrow and/or broad target) will be utilized to notify members or property owners regarding proposed vegetation management work (including herbicides). Listed in no specific order.

- Automated Phone Message (Narrow Target)

If your property falls within the systematic routine vegetation maintenance schedule (targeted area), you may receive an automated phone message with general information about when and what type of work will be done in your area (not member specific). Confirmed message delivery is considered a successful communication attempt. Member/site specific information is instead provided in the door hanger, in-person, or direct call communication methods. A minimum one-week notification will be provided.

- Door Knock (In-Person) or Door Hanger with Instructions (Narrow Target)

After your trees have been evaluated by the contracted tree inspector (See Section 2.6.6 "Identification of Trees to Be Cut Down"), if work is required you may receive a knock on the door by the contractor, forester, or CLP employee to discuss in detail the type of work that will need to be performed. If the property owner is not home, or does not answer, a door hanger regarding right of way maintenance and type of work to be performed will be left on the door. If the property owner is home, the door hanger will be presented and left onsite. The door hanger shall be considered a form of written communication. Notification cards shall not be placed in any U.S. mailboxes. A minimum one-week notice will be provided but the goal is to have weeks to months' notice to facilitate adequate

communication. To avoid delays, if you have any concerns, please thoroughly review the door hanger and respond to your tree inspector in a timely manner according to the instructions.

- **Direct Call (Narrow Target)**

After your trees have been evaluated by the contracted tree inspector (See Section 2.6.6 “Identification of Trees to Be Cut Down”), if work is required you may receive a direct call by the contractor, forester, or CLP employee to discuss in detail the type of work that will need to be performed. The phone number(s) on file at the Cooperative will be used for the direct call method. Generally, direct calls occur if the property owner does not have a physical premise on the property (empty lot) and/or is a seasonal member. A direct call may also be used as a second communication attempt if other communication methods have been unsuccessful.

- **Letter (Narrow Target)**

After your trees have been evaluated by the contracted tree inspector (See Section 2.6.6 “Identification of Trees to Be Cut Down”), if work is required you may receive a letter from the contractor, forester, or CLP with general information about when and what type of work will be done in your area (not member specific). A letter is the last resort of communication if other methods have failed (e.g. – disconnected phone/line issues, invalid contact information, unsuccessful voicemail attempt, no premise on property, safety hazards (dog/site access)).

- **Newsletter (Broad Target)**

A notice describing CLP’s vegetation management program and proposed Right of way clearing areas (including herbicide) shall be published in the CLP newsletter prior to the commencement of right of way clearing.

- **Website (Broad Target)**

The company website ([www.clpower.com](http://www.clpower.com)) shall include CLP’s vegetation management program and a map of the right of way clearing areas scheduled for vegetation management (including herbicide) unless State or Federal owned. Some variation may occur based on emergent situations or budgetary changes and will be made on an as needed basis.

## **Other Communication Guidelines**

- In the case of the industrial, municipal, county, state, or large private estate type of properties, the caretakers or other designated individual in the employ of the owners who are responsible for the trees or brush to be cut or trimmed is considered to represent the interest of the owner. Notification of such caretakers or grounds maintenance supervisors is acceptable.

- If right of way maintenance requires that service be de-energized to perform the work safely, the member/property owner should be notified using the door hanger shown in Section 2.4.3.
- Exceptions to the member notification include outage restoral, emergency, or danger/hazard tree work.

## **Objections**

If the member objects to the work that is required, including pruning, and cutting trees, and the concern cannot be resolved by the crew, the crew should stop work and notify their supervisor. Supervision should contact the owner/member and attempt to explain the work and the need for it to the member's satisfaction, as well as offer alternatives where appropriate and reasonable.

If the member continues to object to the work, CLP management/supervision should take the appropriate steps to ensure that the necessary vegetation management is done. The Cooperative has a responsibility and right to obtain proper clearance for its electric lines.

## **Options for Refusals / Reluctance to Yield Right of Way**

Options to modify right of way clearing may be offered to individual landowners or groups of adjacent landowners that object to clearing or pruning according to the standards indicated by the CLP IVM program. In providing these options, CLP seeks to enable individual members to choose methods for right of way clearance that best address their concerns while preventing the burden of costs for use of non-standard procedures from being placed upon CLP members as a whole. Because of varying site conditions, not all options will be offered in all locations. Options that may be available for a particular site include:

- Relocation/Undergrounding of Lines:

Where consistent with CLP standards for line maintenance/improvement, rerouting of lines or moving lines underground at the member's expense (full cost) will be considered. Rerouting must follow CLP guidelines, and accessibility to the lines must be as good as or better than at the original location. In locations where groups of landowners must agree to rerouting, it is the responsibility of interested landowners to negotiate agreement with adjacent landowners and obtain necessary easements before rerouting can proceed. If such an agreement cannot be obtained within the time frame specified by CLP, right of way clearing will proceed unless other options are negotiated individually with CLP.

### **2.4.2 Member Requests for Tree Work**

CLP will investigate and, if appropriate, act on pruning/removal requests by members. The Cooperative does not, however, prune or trim vegetation to improve light patterns from security lights. If an investigation determines that there is no need to perform the requested



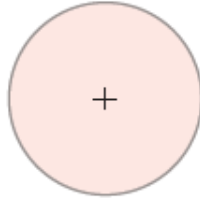
work, the member will be notified. The Cooperative is not responsible for delimbing, sectionalizing, or removing wood or debris from a member request for tree work.

### 2.4.3 Member Notification Door Hanger

The following are door hangers and letters used by the Cooperative in its communications with its members as discussed in the preceding Section 2.4.1. The door hanger is a multi-purpose form, and the appropriate boxes should be checked. The door hangers shall be biodegradable. Any door hanger left with the member/property owner or on the premises regarding right of way maintenance and the type of work to be performed shall include the name and telephone number of the CLP Representative and/or authorized contractor responsible for responding to member inquiries.

## **DISTRIBUTION PLANNED MAINTENANCE**

**DOOR HANGER**  
**(attached below)**



**WE VISITED YOUR PROPERTY**  
Please read this card.



Your Touchstone Energy® Partner 

Location Number

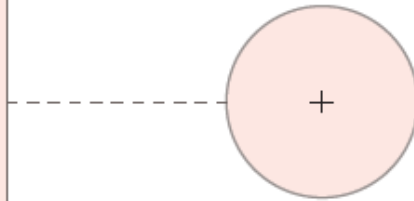
### LINE CLEARANCE WORK NOTICE

Cooperative Light & Power (CLP) contracts with professional line-clearing contractors to perform necessary tree pruning, tree removal, and herbicide application. There is no charge to you to perform this work. Learn more about CLP's Integrated Vegetation Management (IVM) Program by visiting our website: [www.clpower.com](http://www.clpower.com)

Work Locations (Areas)		
<input type="checkbox"/> * Landscaped/Manicured (yards, lawns)	<input type="checkbox"/> * Adjacent Roadside/Driveway	<input type="checkbox"/> * Other, Non-Maintained (rural, back edges, no dwellings)
*Tree Debris & Cleanup varies by defined areas. (chipped, de-limbed, sectioned, brush hogged, windrowed) No debris cleanup or removal for member tree requests. See IVM program and/or quick reference guides on website for more information.		
Trees marked for removal <input type="checkbox"/> Yes <input type="checkbox"/> No		
Type of Work to be Done		
Pruning		<input type="checkbox"/> No
Qty	Species	Notes
Tree Removal		<input type="checkbox"/> No
Qty	Species	Description
Brush Removal		<input type="checkbox"/> No
Qty	Description	

Please see reverse side for more information.

PROOF



Type of Work to be Done (Continued)		
No Work Required	<input type="checkbox"/>	
Other:		
Work Will Start After (Estimated Date):		
Herbicide Application		
Selectively apply EPA registered and approved herbicides to control tall-growing, woody plant species on the right of way.		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Notes		
Site Access		
We may need to drive equipment onto your property. This will be done if site conditions allow.		
Site	Y/N	Notes
Yard		
Driveway		
Work Recently Completed		
Removed Tree - Member Request	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Danger/Hazard Tree Removed	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Contact Information		
If you have questions or concerns about this notice, please contact the following authorized <input type="checkbox"/> arborist/forester, <input type="checkbox"/> contractor, or <input type="checkbox"/> CLP employee within (7) days of the date listed below. If we do not hear from you, we will proceed as planned.		
Date:	/ /	Phone: 218-634-7906
Name:		
Title:		
Company:		
REMARKS OR ALT CONTACT INFO:		

#### VEGETATION MANAGEMENT

The primary objective of the CLP Integrated Vegetation Management (IVM) Program is to control the growth of vegetation along the electric lines so that the Cooperative can provide safe, reliable, affordable energy services to our members. This is accomplished by defining a cycle, using qualified personnel, contractors, and/or foresters, to monitor the condition of the utility right of way and by initiating various vegetation control practices to reduce, manage or eliminate undesirable growth.

Depending on vegetation species, densities, locations, and sizes, the most appropriate tool will be utilized for the given situation and circumstances. IVM Programs are designed to incorporate management tools to provide long term, environmentally sound right of way. When the right control measures are taken, assisted by selective herbicide use, we can help transform rights-of-way into desirable thriving biological communities.

The consistent implementation of industry-accepted vegetation management practices greatly reduces the risk and likelihood of tree and power line conflicts, as well as service interruptions, and allows for the full utilization of the electric distribution system.

PROOF

## 2.5 TYPES OF TREE PRUNING

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### 2.5.1 General Overview

Familiarity with tree growth patterns proves beneficial in pruning individual trees and in planning new overhead lines in tree zones. In general, there are two industry accepted techniques for proper tree pruning – Natural/Lateral Pruning and Directional Pruning.

#### Natural/Lateral Pruning

“Natural” pruning, or “Lateral” pruning as it is sometimes called, shall be utilized in all four types of tree pruning procedures. This type of pruning refers to the removal of a limb from the trunk or a parent limb without damaging the trunk or leaving a protruding stub.

An added benefit of “natural” pruning is the positive effects it will have on the health of the tree. The tree is much less likely to suffer wood decay problems in the future if stubs are not left. Sucker sprout growth will also be greatly reduced as will the numbers of sucker sprouts.

#### Directional Pruning

“Directional” pruning involves cutting back to laterals which are growing away from the conductors. We can effectively influence the re-growth of the tree and minimize our tree/line clearances by combining “natural” and “directional” pruning.

The methods described above can effectively influence re-growth. If stubs are not left, the tree is much less likely to suffer wood decay in the future. Sucker sprout growth will also be reduced.

### 2.5.2 Crown-Reduction Pruning (Tree Topping)

Crown-reduction pruning involves the cutting back of all or portions of the tree’s upper crown and is generally required when a tree stands in close alignment with a primary pole line. On most trees needing crown-reduction pruning, every effort should be made to remove the tree. These trees normally require dramatic pruning to achieve necessary clearances. The visual effects of such pruning, even when done properly, can prove to be the source of conflict with our members.

Historically, an improper type of pruning called “rounding-over” was used to reduce the height of trees for line clearance purposes. Rounding-over to a uniform conical line leaves many stub cuts. This type of pruning became an accepted practice by utilities across the nation and was also viewed positively by many of our members. Although all the scientific evidence

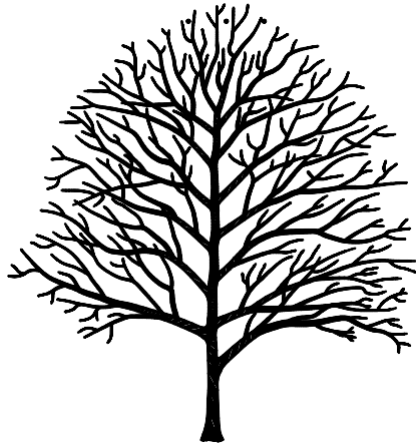
indicates that rounding-over will lead to unhealthy tree conditions, it is sometimes very difficult to convince members that lateral pruning is the preferable method. Common problems resulting from rounding-over includes failure of the cut to properly callus over, which will usually lead to extensive decay. Although an unusually strong flush of “sucker” growth or sprouts will normally occur where stub cuts are made, they will tend to become more and more structurally unsound as they grow, especially if accompanied by decay. Rounding-over is not an accepted pruning method by CLP.

By employing natural pruning techniques to accomplish crown-reduction, we will achieve several objectives. They are:

- Maintain, and, in some cases, increase our line clearance cycle.
- Accomplish the job through professional and defensible methods.
- Maximize the tree's health in the given situation.
- Cause as small an imbalance as possible between the tree's root system and crown by leaving portions of the tree that will not affect the delivery of our product.

Crown-reduction through natural pruning techniques may take on several different forms. If the tree is a central leader type species (such as a sweet gum or a yellow poplar), crown-reduction may very well result in the elimination of the entire top. (See Figure 2.5A). Whereas, if the crown is reduced on a species prone to multiple leaders or spreading crowns. (Such as a maple), the resulting form of the tree may resemble a “V”. (See Figure 2.5A). If the visual effects of a “V-pruned” tree are considered too dramatic, the sides (or “wings”) may be reduced in height through lateral pruning. It should be recognized, however, that this additional pruning accomplishes cosmetic goals only and will serve no useful purpose to the physiological well-being of the tree.

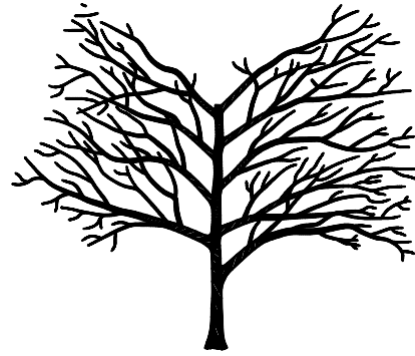
PRIMARIES



Tree Before Pruning

PRIMARIES

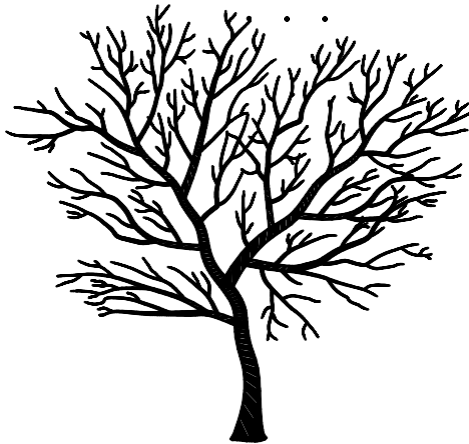
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Tree Following Pruning

Crown Reduction of Tree with Central Leader  
(or excurrent) Type Branching.  
Examples: Pines, Poplars, Sweet Gums

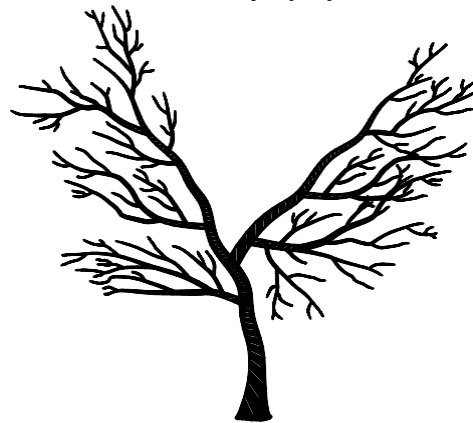
PRIMARIES



Tree Before Pruning

PRIMARIES

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Tree Following Pruning

Crown Reduction of Tree with no Central Leader  
(or decurrent) Type Branching.  
Examples: Oaks, Elms, Maples

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## Figure 2.5 A

### 2.5.3 Side Pruning

Side pruning is the shortening back or complete removal of side limbs of a tree located to the side of a line that project toward conductors. Limbs overhanging the conductors should, under most circumstances, be removed to better protect the lines during adverse weather conditions.

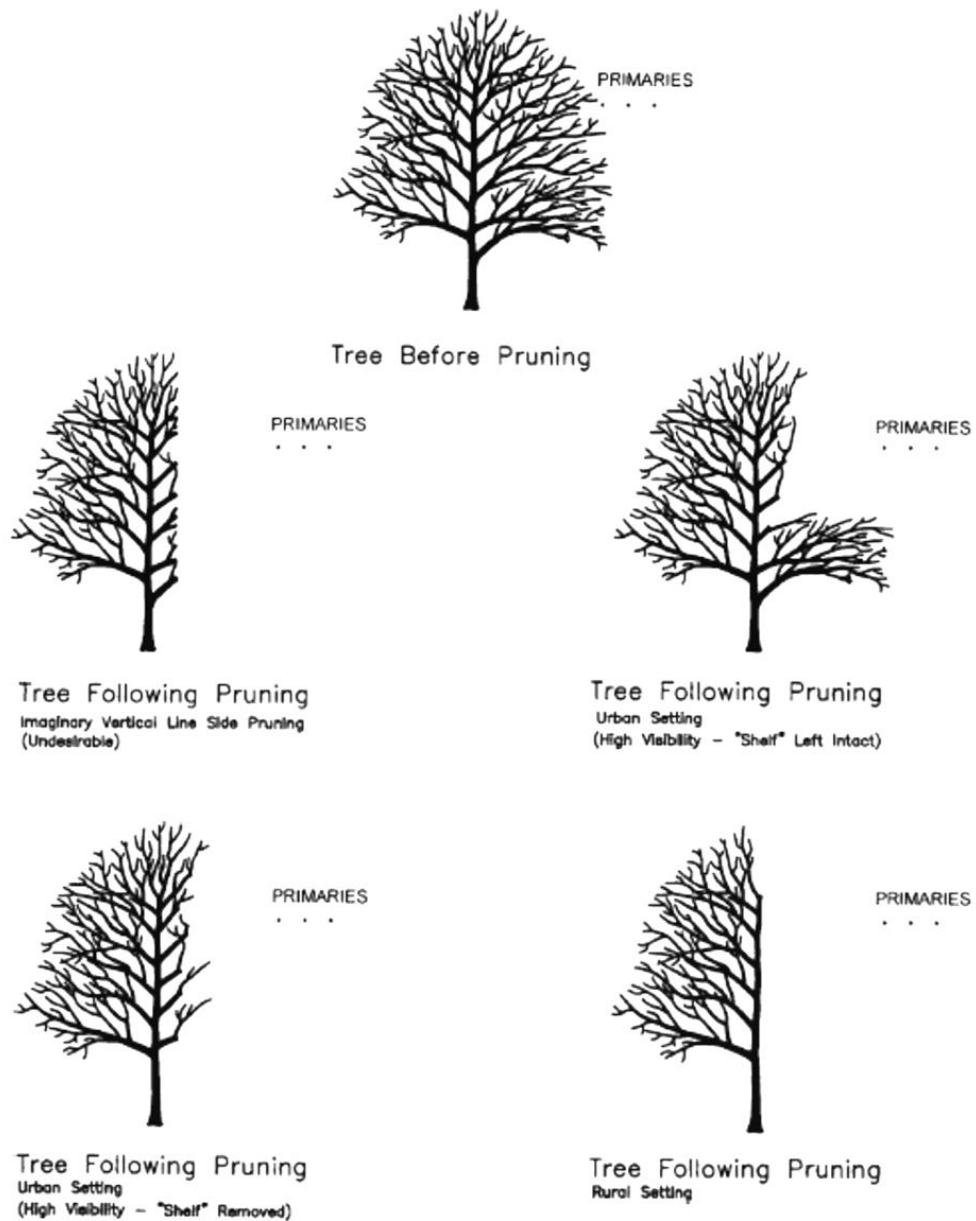
Avoid side pruning trees back to an imaginary vertical line, arbitrarily stubbing limbs back to a certain point. Utilize natural pruning methods and evaluate where each individual limb should be pruned. Basing cuts on the branching habit of each limb will promote better health for the tree, as well as provide a job with a more natural appearance. Note the “shelf” on the naturally side-pruned tree in Figure 2.5B. These lower limbs may be left as shown or they may be lateraled back to varying extents. Discretion, along with individual member desires, should help determine to what extent, if any, these lower limbs should be pruned.

Techniques utilized on a given tree depend greatly upon where the tree is located. In the most rural, less populated areas, where aesthetics is perhaps less important, it may be appropriate to completely prune all of the limbs back to the trunk on the line side of the tree as well as to lateral the top of the tree back away from the line. If this same tree were located in a highly visible urban setting, the pruning methods used should be moderated to some extent. Depending on how close the main trunk of the tree is away from line, one or more of the following modifications may be appropriate:

- The leaving of the “shelf” limbs at or below the communication conductor height level.
- If distances permit, limbs above the “shelf” level may not be removed in their entirety but may be taken back to intermediate laterals.
- Instead of removing every twig and leaf that may be in the desired “cleared” area, some of the small, incidental growth may be left. This type of growth will generally not be the limiting factor on the established line clearance cycle.
- Again, if distances permit, and the tree is of substantial height above the primary lines, some of the more upright limbs at the top of the tree (and on the line side of the tree) may be left. In some cases, they could be shortened rather than removed. This modification is not meant to encourage overhang.
- When removing portions of limbs on the line side of the tree, the aesthetics may be improved quite dramatically by varying the distances from the line that the individual limbs are cut. The more the cuts can vary from being vertically aligned with one another, the more natural the tree will look following pruning.

- Although pruning cut dressing is not required or recommended for purposes of the tree's health, the use of the dressing can help to soften the visual effects of large limb removal. When the dressing is used, only a light covering should be applied. Special attention shall be given to pine trees, which are especially susceptible to being affected by ice and wind conditions. Pines should be pruned such that ice loading will not cause them to fall toward the conductors. This can most easily be achieved by pruning limbs off of the line side of the pine. Discretion must be exercised in determining to what extent the pine should be pruned. In totally rural areas, this will probably result in the pruning of all the limbs off of the line side of the tree. In these most rural, less populated, non-landscaped/manicured areas where aesthetics is potentially less important, the tops of pines may be lateraled back to some extent. However, where this technique is utilized, care shall be taken to ensure the pine retains enough leaf area such that its viability is not threatened, resulting in a dead "danger tree." In more urban areas, where aesthetics may play a role, additional moderation in the extent of pruning may be warranted. In these cases, consideration should be given to leaving some of the smaller and shorter limbs at the very top of the tree instead of completely stripping the entire line side of the pine.



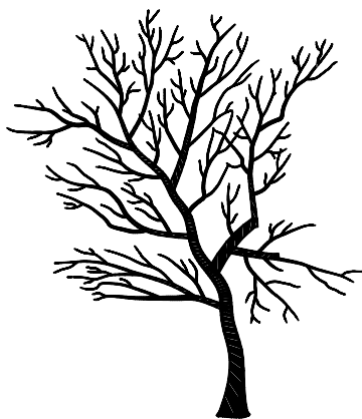


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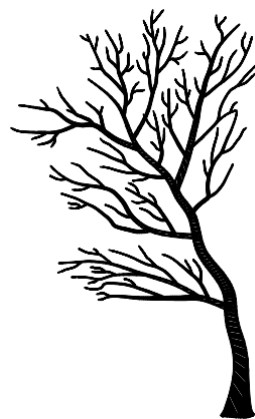
**Figure 2.5B**



Tree Before Side Pruning



Tree Following Side Pruning  
Urban Setting – High Visibility



Tree Following Side Pruning  
Rural Setting – Low Visibility

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**Figure 2.5C**

#### 2.5.4 Under Pruning

Under pruning refers to the cutting of limbs and branches back to a major limb or the tree's trunk to provide conductor clearance below the tree crown. Under pruning is an available option for secondary lines. It is not a recommended practice on primary lines due to safety and reliability concerns.

#### 2.5.5 Through Pruning

Through pruning is the removal of limbs and branches from inner tree crowns to make room for the passage of conductors. This type pruning is best suited to service, streetlight and covered secondary conductors. Through pruning is not recommended for primary conductors.

#### 2.5.6 Combinations

Combining some of the pruning techniques listed above is sometimes appropriate and necessary. Determination of the proper techniques to use on individual trees will depend on surrounding landscape factors, proximity of the tree to the conductors, tree species, previous pruning techniques utilized and line voltages.

## **2.6 TREE REMOVAL ON DISTRIBUTION RIGHT OF WAY**

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### **2.6.1 Reasons for Tree Removal**

For more satisfactory line clearance, it is preferable to cut down specific trees under certain conditions rather than proceed with pruning. Pruning may be an option in a lawn or front/back yard area depending on the type of tree and situation as these areas are highly visible and often highly sensitive to the property owner. If pruning of a tree would remove more than 30% of the live crown, then full tree removal will likely be required to stay compliant with industry guidelines and best practices for tree health. Additional information is provided below regarding tree removals.

### **2.6.2 Member Notification of Tree Removals**

- The intent of the notification process is to provide multiple points of contact using multiple methods to diminish miscommunication or non-communication. Our processes are designed to promote discussions with property owners before a tree is cut down.
- Member notifications shall be made in accordance with the guidelines outlined in Section 2.4.1.
- Exceptions to the member notifications include outage restoral, emergency, or danger/hazard tree work.

### **2.6.3 Varieties to Be Cut Down**

The following varieties will be cut down because they impede maintaining satisfactory, safe line clearance and because of their growth characteristics:

- Fast growing trees such as poplars, willows, ailanthus, Chinese elm, silver maple and boxelder. (These species will normally have weak limb structure and/or brittle wood.)
- Spindly pine trees that are likely to fall across the line during high wind or ice conditions.

### **2.6.4 Conditions Under Which Trees Should Be Considered for Cutting Down**

- Large-maturing tree species that have been rounded-over in the past and have no future chance for reasonable natural development.
- Trees identified as “danger/hazard trees” – defined as those which are badly decayed, diseased, “Widowmakers”, broken or detached limbs or trunk, dead or dying trees.

- Trees growing in shallow soil or with shallow root systems subject to wind throw.
- Trees prone to structurally unsound limb junctions (or included bark).
- Trees that can be cut down more economically than pruned.
- Trees that otherwise jeopardize obtaining adequate clearance.
- Trees hindering access or maintenance of the electric distribution system.

#### 2.6.5 Tree Removal Practice Relating to Secondary Conductors and Services

It is generally not the primary focus of CLP to cut trees endangering secondary conductors and service cables unless there is a safety concern or another member's service may be negatively affected. If a property owner decides to have any type of work performed around a service cable by themselves or their contractors, CLP may temporarily disconnect the service cable.

#### 2.6.6 Identification of Trees to Be Cut Down

Trees in landscaped/manicured areas that have been identified as those to be cut down may be tagged with marking spray (spray paint). The pattern should be a dot at about eye level. Blue or any other color used to mark local property lines or boundaries should be avoided. This identification can serve two purposes. The marking spray will identify for the member, the trees we intend to cut down. It will also identify for the contractors the trees that are to be cut down.

The marking of individual trees is not necessary, unless special circumstances are identified, in all non-maintained and/or adjacent roadway/driveway areas. Initial (new line extension) clearing will remain unmarked.

## **2.7 BRUSH CUTTING ON DISTRIBUTION RIGHT OF WAY**

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### **2.7.1 Definition of Brush**

Brush is defined as vegetation that is six (6) inches or less DBH (diameter at breast height). Brush that could eventually reach a primary line or dense brush hindering access or maintenance of the electric distribution system is typically removed.

### **2.7.2 Low Maturing Trees**

Low maturing trees in Landscaped/Manicured Areas (e.g.- lawn or front/back yards), such as dogwoods, are not considered brush and shall be pruned as necessary according to the prescribed line clearance specifications. In Non-Maintained and Adjacent Roadside/Driveway Areas, low maturing trees are typically removed. Good judgment should be utilized in assessing such sites to determine the appropriateness of either eliminating the vegetation or encouraging it.

### **2.7.3 Brush Cutting**

All cuts when removing brush shall be made as close and parallel to the ground surface as practicable, preferably two (2) inches or less. Exceptions may occur depending on access required (frozen ground) such as time of year and snow conditions present. Other considerations are obstructions in the right of way including rocks, stumps, pedestals, or markers.

## 2.8 HERBICIDE USE ON DISTRIBUTION RIGHT OF WAY

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### 2.8.1 Herbicide Use – General Overview

Herbicide use on distribution right of way is an effective tool in controlling brush. Herbicides shall be used in a conscientious manner. Users shall be familiar with the product labels, uses, rates, and precautions. CLP requires that herbicide application crews be led by licensed pesticide applicators. Herbicide drift/overspray is to be minimized by exactly following the manufacturer's label directions.

Additional information on the Cooperative's herbicide program is located on the CLP website at [www.clpower.com](http://www.clpower.com)

**Note:** The most important fact to remember is that you must always read and follow the manufacturer's label directions. Do not apply herbicides if you are in doubt about a particular application or use.

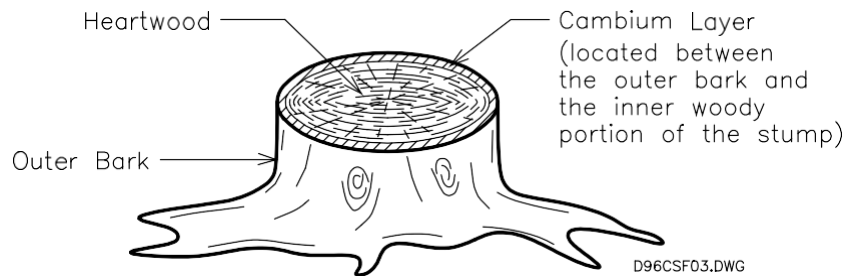
CLP primarily uses cut surface treatments (stump treatment), foliar spray, and basal treatment as a part of its overall herbicide program. These applications are described in the following sections.

### 2.8.2 Cut Surface Treatments (Stump Treatments)

Tree physiology dictates that when hardwood brush and trees are cut down, the remaining root systems of the plants will, in most cases, rapidly re-sprout. It is not unusual to observe 6-8 foot sprouts occurring out of existing hardwood stumps within one growing season following cutting. By using herbicides on the cut surface of the stumps (stump treatment), the Cooperative can eliminate the particular incompatible species from future maintenance. Stumps of conifers (pines, cedars, and other junipers) should NOT be treated.

Cut surface treatments involve an appropriate herbicide or herbicide mix, which is applied to the freshly cut surface of a hardwood stem or tree.

Stump treatments must be made as soon as possible following the cutting of the stem or tree. The sooner the product is applied to the cambium area of the stump, the more effective the treatment will be. Crews should not wait until midday or day's end to go back and treat the cut stumps. The product should be applied only to the perimeter (or cambium area) of the cut surface. (See following figure)



The cambium layer is where the conductive vascular tissue of the stem lies, and where the product is capable of being picked up and transported to the root system of the plant. Avoid allowing this product to drench or run down the barked sides of the stump. Very little benefit, if any, can be derived by allowing the product to run down these barked portions and depending on the product used, it can contribute to undesirable effects on non-target vegetation.

### 2.8.3 Foliar Application

By far, foliar application of herbicides offers the greatest opportunity for improving right of way by eliminating unwanted and non-compatible vegetation. Through the use of low- volume backpack foliage sprays, we can change the species composition on our right of way. This change involves going from a high density of undesirable hardwood and pine stems in a right of way to one comprised of grasses, weeds, vines, and wildflowers.

Several different herbicide mixes are very effective foliar treatments. A number of refinements in the herbicide mix have been made over the years to derive the most effective combination of products that will yield the broadest spectrum of control. Generally, the mix is comprised of approximately 4-5% of actual herbicide product and about 95- 96% water. On initial treatment of typical brush conditions approximately 12- 15 gallons of the product mixture may be utilized to treat an acre of right of way brush. Foliar applications used in the past normally required much more product to be applied and also required complete saturation of all the foliage on the plant. Applications today only require “spotty” coverage of the target plant for effective control. This maximizes the amount of herbicide that is actually applied to the target plants and minimizes the amount of herbicide required to accomplish the desired control.

#### 2.8.3.1 Key Criteria for Successful Foliar Treatment

Several “key” criteria are needed to have a successful foliar treatment program. It is imperative that we have knowledgeable, trained and conscientious individuals applying herbicides. This aspect cannot be overemphasized. Herbicide applications will sometimes be controversial, and our procedures and techniques must be sound, factual, and capable of withstanding scrutiny. Therefore, our Cooperative requires that each herbicide crew be led by a state licensed pesticide



applicator.

#### 2.8.3.2 Advantages/Disadvantages of Foliar

Treatment Advantages include:

- A properly foliar treated right of way will become more attractive over time. Although there may be brown-out issues initially, the dead leaves will drop, and the dead stems will fall. At the same time, there will begin to be an influx of compatible vegetation, such as grasses, weeds, wildflowers and other herbaceous growth. As a result, less maintenance will be required on the floor of the right of way in the future, and the right of way will move toward a more self-sustaining state.
- The right of way will be much easier to access when restoring power outages as well as during other maintenance activities.
- The compatible vegetation creates a bio-diverse situation that favors many forms of wildlife such as songbirds, butterflies, rabbits, deer and turkey.
- On subsequent retreatment of these right of way, there will be less brush to treat, more compatible vegetation, less visually distasteful brown-out of dying brush after treatment, and less time needed, and less volume of herbicides needed to accomplish the treatments.

Disadvantages include:

- The most common “negative” associated with foliar applied herbicides is that a treated right of way is not visually appealing within the first several weeks after application. The brown-out effect of the dying brush can be an extremely sensitive issue with some members when the treated brush is highly visible.
- In many cases, members know little about the herbicides and are initially inclined to request that herbicides not be utilized on their property. Quite often, however, we find that explaining the details of the treatments (such as how the products utilized, and their practically “non-toxic” properties) can be the key to members’ understanding and acceptance of the program.

#### 2.8.4 Basal Treatments

Basal treatments may be made on standing stems. The treatment is normally reserved for taller growing stems located in more remote areas. Since this treatment will result in a standing dead stem, caution must be exercised to make certain that the stem will not present a danger to the lines or other “non-target” objects when the stem succumbs, decays and falls. Basal applications offer several advantages. First, you do not have to cut the stem as you do in the cut surface application and, second, these applications may be year-round, unlike foliar applications, which have seasonal limitations to their use. Another advantage is that with applications made during the dormant season, there are no associated member problems

with the browning out of foliage, as sometimes experienced with foliar treatments.

Basal treatments use an herbicide product that is compatible with being mixed with oil type carrier. The herbicide mixture is usually applied by an applicator with a backpack and wand. The application is applied to the lower 12 to 18 inches of the trunk. It should cover the barked portion of the entire circumference of the stem and all the way down the root flairs to the edge of soil contact. The oil carrier containing the herbicide product penetrates the outside bark of the stem and enters the vascular system of the plant. Through its systemic activity, it is then transported throughout the plant to provide control.

One caution should be noted when dealing with an oil-based carrier. During periods of high temperatures, there is a possibility of chemical volatility and thus the possibility of damage to off-site vegetation. Therefore, applications should be avoided during periods of high heat where such damage cannot be tolerated.

Generally, basal treatments are more costly than foliage treatments due to the labor-intensive nature of the application. However, cutting foliage allows for resprouting, which must be treated later. Therefore, although generally somewhat more costly, basal treatments may be economically justified in some situations.

#### 2.8.5 Herbicide Communications and Member Refusal of Herbicide Application

CLP considers the use of herbicides an important aspect of its overall right of way program. The use of herbicides is both environmentally acceptable and economically feasible and is a key factor to a successful IVM program. If the member objects to the use of herbicides, the representative should fully explain the products we use and the environmental benefits of using herbicides. Past experience has indicated that the great majority of our members accept our herbicide program when they understand it; therefore, proper communication with members is an important step and is a core part of our foliar spray program.

The intent of the notification process is to provide multiple points of contact using multiple methods to diminish miscommunication or non-communication. Our processes are designed to promote discussions with property owners before work is performed.

For member notification regarding herbicide treatments, CLP will post notifications with maps on the website unless State or Federal owned, and follow the other guidelines as outlined in Section 2.4.1. CLP also provides an annual newsletter article to explain the use of herbicides in its right of way and the methods used. A copy of the annual newsletter article is shown in Section 5.1.

If a property owner has concerns or would like more information about CLP's herbicides program, the property owner should contact CLP's authorized contractor or forester with the number available on the CLP website. The vegetation management specialist or contracted forester will provide information to the property owner and refer them to the website for more information.

If a property owner refuses to allow the application of herbicides on his/her property, the

owner must agree to all of the following:

1. Complete and agree to all conditions in the Right of Way Herbicide Variance Agreement attached to Board Policy II-13 Integrated Vegetation Management.
2. List a specific reason why they object to herbicide application.
3. Allow the opportunity for future discussion with a licensed forester/contractor experienced in herbicides.
4. Agree to not put signs in right of way. Due to safety concerns regarding buried underground facilities (electric, gas, sewer, fiber, telephone) in no circumstance shall any signs (no spray) be placed in the right of way or on any Cooperative poles or equipment. CLP will not provide no spray signs as it is not required because the refusal/variance is tracked via parcel number and is tracked via the vegetation management/workflow management software systems. At any time, a member may request to see a copy of their individual herbicide refusal/variance parcel map.

### **3.1 Adaptive Management Through Use of Technology**

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#### **3.1.1 Record Data**

Accurate records are necessary for adaptive management. Pertinent data can be recorded on web-based, geospatial, workflow management software, which enables direct communication among crews, supervisors, and management. All herbicide records need to be maintained as required by state and federal law.

#### **3.1.2 Adaptive Management (Continuous Improvement)**

Each maintenance project causes vegetation and site changes. Outcomes should be compared to objectives and used to modify plans for the next round of maintenance as necessary. The important point is that each plan cycle builds on the previous application to progress toward program goals.

Therefore, it is the position of CLP that the IVM technology/software solutions implemented by itself or its contractors, have the ability and/or flexibility to record, track, report, and manage the data collected. Best practices examples include items such as:

- Capture the results and progress of the work.
- Create a detailed plan of all the work required along the ROW.
- Quantify the work to calculate costs and assign them to contractors.
- Capture the results and progress of the work.
- Have the ability to attach photographs.
- Include auditing capabilities for accuracy and quality.
- Identify correlations with reliability metrics.
- Provide custom reports.
- Identify environmental concerns.
- Facilitate the notification process and documentation.
- Create and track focus areas of concern (no spray, dog, hazard area, etc.).
- Allow real time management.
- Add efficiency to the program.
- Measure progress toward goals.

## 4.1 MINIMUM APPROACH DISTANCE (MAD) GUIDELINES


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*Operating Agreement for CLP Employees or its Contractors, Working on Trees within the Minimum Approach Distance (MAD). Member-Owners shall never approach any vegetation within the MAD distance of 10' from any energized conductor.*

Minimum Approach Distance (MAD) – As defined by OSHA, the closest distance an employee based on his qualifications, is permitted to approach an energized or a grounded object.

The following outlines the best practices for vegetation removal within certain distances of energized distribution conductors.

### Primary Line

1.  Stop work if vegetation to be removed is within the Minimum Approach Distance (MAD). (See ANSI Z133 Standard for “phase to phase” MAD footages.)
2. Contact and consult contractor supervision and CLP’s Operations Manager regardless of whether the vegetation will be worked with a bucket or a climbing crew.
3. If vegetation is contacting the line, the line must be de-energized and grounded prior to work on the tree progressing.
4. Insulated tools can be used to remove the vegetation in the case of a bucket or in the case of climber (if the tree is inaccessible by a bucket or a remote cutter (Skytrim, Jarraff, etc.)). Insulated tools will be kept clean and dry.
5. Workers must always stay out of MAD!
6. A bucket is the preferred method to accomplish this work (as opposed to a climbing crew.)
7. Remote cutters (Skytrims, Jarraffs, etc.) may be utilized to clear the vegetation if the vegetation is not in direct contact with the conductor. (Manufacturer’s specifications will always be used in the determination of whether the equipment is tested for the applicable voltage.) Remote cutters (Skytrims, Jarraffs, etc.) may be operated both inside and outside the MAD.
8. Vegetation orientation to line (i.e., overhang vs. lateral distance) will be taken into consideration prior to commencement of work. Factors such as the possible sway of the tree

in wind, etc. shall be considered prior to working. Other aspects of hazard awareness will also be considered in the work plan.

9. Only fiberglass pole pruners will be utilized on distribution voltages. Wood poles/handles are not allowed.

## **5.1 GENERAL COMMUNICATION**

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(Door hanger, annual herbicide newsletter article, etc.)



## **Providing reliable electric service through vegetation management.**

Vegetation on power lines can adversely impact the reliability of your electric service. To minimize power interruptions or hazards to line workers and the public resulting from overgrowth, Cooperative Light and Power (CLP) uses an environmentally responsible vegetation management program to control the natural plant growth within the power line right of way; a critical part of this program is herbicide application. Our objective with herbicide application is to keep power lines clear of tall-growing plants while maintaining low-growing vegetation for wildlife habitat.

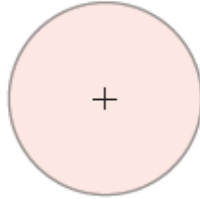
We use professional, licensed contractors to apply herbicide by utilizing different methods including foliar, stump, stem and vine applications.

CLP contractors have been trained on the proper, safe and environmentally responsible techniques of managing plant growth. All products used by CLP's contractors are approved by the Environmental Protection Agency and appropriate state agencies.

If you have any questions about CLP's vegetation management program, please review the information on our website at [www.clpower.com](http://www.clpower.com) or call 218-834-2226.

Cooperative Light & Power  
1554 Highway 2 • P.O. Box 69 • Two Harbors, MN 55616  
218.834.2226 • 800.580.5881 • Fax: 218.834.2227 • [www.clpower.com](http://www.clpower.com)  
*Cooperative Light & Power is an equal opportunity provider and employer.*





**WE VISITED YOUR PROPERTY**  
Please read this card.



Your Touchstone Energy® Partner 

Location Number

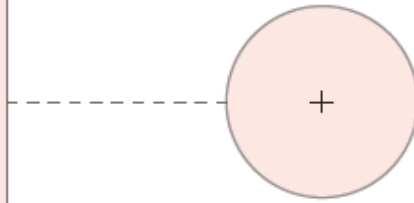
### LINE CLEARANCE WORK NOTICE

Cooperative Light & Power (CLP) contracts with professional line-clearing contractors to perform necessary tree pruning, tree removal, and herbicide application. There is no charge to you to perform this work. Learn more about CLP's Integrated Vegetation Management (IVM) Program by visiting our website: [www.clpower.com](http://www.clpower.com)

Work Locations (Areas)		
<input type="checkbox"/> * Landscaped/Manicured (yards, lawns)	<input type="checkbox"/> * Adjacent Roadside/Driveway	<input type="checkbox"/> * Other, Non-Maintained (rural, back edges, no dwellings)
*Tree Debris & Cleanup varies by defined areas. (chipped, de-limbed, sectioned, brush hogged, windrowed) No debris cleanup or removal for member tree requests. See IVM program and/or quick reference guides on website for more information.		
Trees marked for removal <input type="checkbox"/> Yes <input type="checkbox"/> No		
Type of Work to be Done		
Pruning		<input type="checkbox"/> No
Qty	Species	Notes
Tree Removal		<input type="checkbox"/> No
Qty	Species	Description
Brush Removal		<input type="checkbox"/> No
Qty	Description	

Please see reverse side for more information.

PROOF



Type of Work to be Done (Continued)		
No Work Required	<input type="checkbox"/>	
Other:		
Work Will Start After (Estimated Date):		
Herbicide Application		
Selectively apply EPA registered and approved herbicides to control tall-growing, woody plant species on the right of way.		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Notes		
Site Access		
We may need to drive equipment onto your property. This will be done if site conditions allow.		
Site	Y/N	Notes
Yard		
Driveway		
Work Recently Completed		
Removed Tree - Member Request	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Danger/Hazard Tree Removed	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Contact Information		
If you have questions or concerns about this notice, please contact the following authorized <input type="checkbox"/> arborist/forester, <input type="checkbox"/> contractor, or <input type="checkbox"/> CLP employee within (7) days of the date listed below. If we do not hear from you, we will proceed as planned.		
Date:	/ /	Phone: 218-634-7906
Name:		
Title:		
Company:		
REMARKS OR ALT CONTACT INFO:		

#### VEGETATION MANAGEMENT

The primary objective of the CLP Integrated Vegetation Management (IVM) Program is to control the growth of vegetation along the electric lines so that the Cooperative can provide safe, reliable, affordable energy services to our members. This is accomplished by defining a cycle, using qualified personnel, contractors, and/or foresters, to monitor the condition of the utility right of way and by initiating various vegetation control practices to reduce, manage or eliminate undesirable growth.

Depending on vegetation species, densities, locations, and sizes, the most appropriate tool will be utilized for the given situation and circumstances. IVM Programs are designed to incorporate management tools to provide long term, environmentally sound right of way. When the right control measures are taken, assisted by selective herbicide use, we can help transform rights-of-way into desirable thriving biological communities.

The consistent implementation of industry-accepted vegetation management practices greatly reduces the risk and likelihood of tree and power line conflicts, as well as service interruptions, and allows for the full utilization of the electric distribution system.

PROOF

## DOCUMENT REVISION HISTORY

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Created by Kevin Olson 6/5/2023

Reviewed by Davey Resource Group (DRG) 9/26/2023

Reviewed by CLP Board of Directors 9/27/2023

Revisions:

## APPENDIX

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