

	Vegetation Management--Procedure	
	Section 400	Revised Date: July 31, 2007

**CENTRAL MAINE POWER COMPANY
AN ENERGY EAST COMPANY**

**Vegetation Management
Field Operating Procedure 400**

Document No: FOP 400
Approved By: W.J. Davis
Revision Date: July 31, 2007
Revision Number: 2

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**1. Vegetation Management--Overview
Field Operating Procedure 400**

FOP 400 defines the policies and guidelines that will provide for the efficient implementation

Vegetation Management Department is committed to public and employee safety and the reliable transmission of energy to all the organization's customers. When trees and limbs contact energized conductors power quality is diminished, power outages increase, and the potential of human injury escalates.

Trees that have the potential to contact the wires must be pruned or removed on a periodic basis. Electric circuits when managed on a periodic basis have fewer power quality problems. Power lines can be maintained at a lower annual cost over time if the trimming is completed before the limbs overtake the conductors. The clearances are based on the average growth rates of the most common tree species growing in Maine.

The vegetation management system goal will be to provide safe reliable flow of electricity. Periodically a predetermined portion of the system shall be maintained. The Company will prioritize the circuits so those with the greatest risk are cleared first each year.

The vegetation along transmission system will be managed on a four year cycle. Every year the capable species are removed and screens are pruned along one fourth of the system. Side trimming and danger tree removals will be conducted as required.

COMPANY is committed to environmental stewardship and vegetation management managers will seek to select the most benign treatments possible. COMPANY will only use pesticides registered by the Maine Board of Pesticide Control and approved by the U.S. Environmental Protection Agency. Landowners and abutters rights will be considered and alternatives will be offered whenever practical. COMPANY staff will cooperate and coordinate work as practical with state and municipal representatives.

Safety will be incorporated into the departmental work culture. Regularly scheduled safety meetings will be conducted with contractor work force.

2. CUSTOMER NOTIFICATION

The utility will follow the trimming notification guideline established by an Act to Expedite the Maintenance of Utility Facilities. The notification program key points are:

Annual notices will be sent to customers, municipalities, county commissioners, and Department of Transportation. Two newspapers covering each portion of the service territory will publish tree trimming advertisements.

The utility shall maintain a customer contact list of all landowners who wish to be contacted before tree work is started on trees that are located in the public way.

Tree work performed where COMPANY possesses transmission line easements does not require customer notification. The same is true for work performed where COMPANY holds distribution line easements.

Construction notification will follow guidelines established in FOP 405.

Contractor will consult with all landowners on the customer contact list or when a shade or ornamental tree is removed before any tree work is started. A shade or ornamental tree is any tree adjacent to landscaped, managed, or developed area.

Contractor will use good judgment and will notify landowners when working in landscaped areas. COMPANY door knockers will be provided. COMPANY will treat all landowners with care and communicate when major changes to the trees are required to achieve the required clearance to the conductors.

The routine customer notification policy is exempt during emergency restoration efforts.

3. BUDGETS

The Vegetation Management Operations Department will manage an annual budget. Budget

allocations will be based on service center size, power outage history, outage indexes, power quality problems, required removals, required trim, and herbicide applications.

All tree work will be issued to qualified contractors on either a time and material basis, an established unit price, or through a lump sum bidding process. T&M work (work paid for on predetermined hourly rate for labor and equipment), Unit Price work (work done at an established cost per unit or span completed), Lump Sum work (work done at a cost for the total project or listed scope of work).

4. VEGETATION MANAGEMENT WORK FORCE

The Utility Arborists have overall responsibility for supervising the vegetation management program in their area of responsibility. The Vegetation Management staff consists of trained professionals holding State of Maine arborist and pesticide applicator licenses. Arborists hired at COMPANY will hold a four-year degree in a related field. Utility Arborists must hold a valid driver's license, have a thorough knowledge of trees, understand appropriate regulations, possess an awareness of electrical safety, a complete understanding of utility pruning standards, and an appreciation for customer service. Annual compliance training will be required.

4.1 Distribution and Transmission Utility Arborists' Responsibilities

- The job qualifications for the Utility Arborists can be located in the Energy East job qualifications file.
- Efficiently share resources between functional areas.
- Ensure that contractor tree crews' work quality, safety, and productivity meet the Company guidelines.
- Efficiently schedule maintenance & construction tree work.
- Authorize changes in crew size, numbers and equipment.
- Using new technology develop and advance programs to monitor and improve vegetation Management tools.
- Manage customer requests for tree work.
- Investigate/resolve customer complaints.
- Weekly check time crew sheet accuracy, make file corrections and manage files.
- Coordinate power quality complaints and solutions with other departments.
- Support the power restoration efforts by coordinating tree crews for service centers.
- Work with state representatives, municipal officials, and landowners to explain vegetation management policy issues.
- Enhance maintenance budget through cost sharing with other utilities, municipalities, agencies, or landowners.
- Develop a public understanding of line clearance principles and applications.
- Evaluate new ROW maintenance products and procedures.
- Coordinate work with other departments, e.g. substations, telecommunications, distribution line, transmission operations and real estate.
- Participate in educational opportunities.

4.2 Vegetation Management Specialist Responsibilities

- The Vegetation Management Specialist job qualifications are on file with human resources.
- Generate weekly invoices, update all spending tracking sheets.
- Maintain customer contact log.

- Weekly processing of files at general office.
- Interface with customers and efficiently communicate with Utility Arborists.
- Inventory all electronic hardware.
- Provide software support for all specialty programs in a timely basis.
- Work with vendors to ensure customized programs are operating properly.
- Provide software support to the Utility Arborists.

4.3 Vegetation Management Production Work

All vegetation management production work will be performed by an approved utility contractor.

The contractor shall be primarily engaged in the tree service business and shall meet the following Company requirements:

The contractor and at least one member of each crew shall hold valid Maine arborist and pesticide applicator licenses (category 6). New foremen shall have ninety (90) days in which to complete requirements of both arborist and pesticide licenses. The crews not fully licensed at the end of the ninety day period may not work on the system until the licenses are obtained. The Company requires the contractor to complete the work according to approved arboricultural standards and within governmental regulations.

The contractor operates independently and not as an agent of the Company. The Company requires the contractor to maintain liability and property damage insurance holding the Company free from damage and accident claims, related to their work.

4.4 ANSI A300 Pruning Standards

All line clearance and contractor personnel are required to operate in accordance with ANSI Z.133.1 Standards, OSHA 1910.269 Standards, Pruning Trees Near Electricity Utility Lines guidelines, and COMPANY safety rules.

At least one member of each crew shall speak English so that they can explain work practices to the abutters.

COMPANY will partner with all approved contractors in order to maximize mutually beneficial goals. The partnering process may include meetings, incentives and achieving corporate goals.

Performance standards will be set annually for individual tree crews working on the COMPANY system. Performance review for each crew will be tracked quarterly. If a crew's individual numbers fall outside the Company standard, the crew will be placed in a performance review program. The crew has 90 days or one quarter to meet the performance standards. Should the substandard performance continue the contractor will be asked to remove the foreman or place the crew on a negotiated unit price per span. The foreman and utility worker can not be interchanged in this situation.

4.5 Contracts and Price Schedules

All line clearance contractors employed by the Company must negotiate an acceptable contract with the Company. The contract serves to establish certain responsibilities, operating methods, ensure that trained crews and safe equipment are used. Price schedule revisions shall be negotiated by the Purchasing Department and a copy of the latest schedule shall be sent to the Utility Arborists.

4.6 Equipment for Standard Distribution Crew

At a minimum, equipment for a standard distribution crew shall include a truck and chipper which are in good operating condition, two chain saws, whiz saws, pruners, pruner poles, ropes, saddles, flashlights or spotlights and safety equipment, which shall include hard-hats,

eye protection, hearing protectors and chaps. Supplies shall include tire chains, saw chains, saw blades, files, chain saw oil, etc.

4.7 Role of Notification Person

The notification person shall have enough experience to properly explain to landowners the required clearances and the necessary procedures to obtain those clearances. The contractor is responsible to obtain permission when necessary and any required permits when necessary. All customers listed on the contact log will be notified in advance of starting tree work. When shade or ornamental trees are to be removed the landowner must be contacted. Reasonable judgment must be used to notify landowners where major tree work is planned; this is a key element to the success of the program. Public relations should be planned for each job.

Assist the Utility Arborist in service request management.

4.8 Role of Supervisors

CONTRACTOR Supervisors will be required to perform the following with respect to crews that are working on the COMPANY transmission and distribution system;

Verify that all crew work locations are reported daily.

Meet with each crew a minimum of once per week to ensure each crew has a full complement of equipment to perform the entire scope of work.

Ensure that crews have the technical knowledge and meet the licensing requirement as detailed in this Field Operating Procedure.

Field check handheld computer or DWR paper reports to ensure that work activities are entered appropriately.

Coordinate and document training programs for all crew personnel.

Meet with the respective Utility Arborist at least once per week and advise of any necessary changes in crew locations, crew composition, equipment breakdowns, customer complaints, etc.

Participates in periodic work evaluations.

When crews elect to continue to work during inclement weather, the contractor supervisor and the COMPANY Utility Arborists have the responsibility to issue work that can be performed during those climatic conditions. However, it is the contract supervisor's responsibility to ensure that work is performed. For those crews that postpone work and attempt to make it up on a Saturday, the contractor Supervisor has the obligation to obtain the Utility Arborist's approval prior to performing that work. In addition, the Supervisor must randomly check on the crew progress.

Supervisor shall assist crew foreman in resolving customer complaints and permission problems. In addition, the contract supervisors have the responsibility to forward complaints and/or damage claims to the Utility Arborists using Form 2928.

Supervisors are responsible to ensure all paper work and forms are completed in a timely fashion.

Falsification of timesheets is not acceptable and if this should occur the supervisor will manage the first offense, give a verbal warning to the offending foreman which will be documented on a 2920 form. If a second offense occurs the foreman will be removed from the Company system for one year.

5. TRANSMISSION RIGHT-OF-WAY (ROW) VEGETATION MAINTENANCE

The transmission grid will be maintained so that the established ROW is available for the

safe and reliable flow of bulk electricity between substations, generation sites, switches, or connecting lines. All capable tree and shrub species will be managed with a cost effective and environmentally appropriate program ensuring that all federal, local, and state laws are observed. The cleared ROWs will be managed on a cyclic basis. Careful observations will be made in buffer areas to monitor tree growth.

An approved qualified utility contractor will perform all vegetation management production work. The contractor shall primarily be engaged in the utility vegetation management business and shall meet the following Company requirements:

- The CONTRACTOR and the crew foreman of each herbicide application, ROW clearing, screen, and pruning crews shall hold valid Maine Arborist and Pesticide Applicator licenses (category 6A).
- The crew foreman and another crewmember of each herbicide application crew will possess a Maine Pesticide Applicator license (category 6A). Pesticide applicators must be continually supervised on-site by someone possessing a Maine Pesticide license, per state laws.
- The CONTRACTOR operates independently and not as an agent of the Company. The Company requires the CONTRACTOR to maintain their own liability and property damage insurance holding the Company harmless from damage and accident claims.
- All CONTRACTOR personnel are required to operate in accordance, with all state and federal laws.

Examples:

ANSI Z.133.1-1988
OSHA 1910.269
Maine Slash Law (title 12, section 9332 and 9333)
Maine High Voltage Act
COMPANY Safety Manual
Maine Pesticide Regulations
ANSI 300 Pruning Standards

COMPANY's transmission vegetation management program consists of four (4) maintenance activities; screen maintenance, danger tree removal and side pruning, tree and brush removals, and herbicide application. All 4 preventative maintenance activities requires the use of herbicides, and several precautions have been established regarding this program: Herbicides are not to be applied within a minimum of 25 feet to surface water, rivers, brooks, ponds, flooded wetland, etc. depending on environmental conditions.

Herbicides are not to be applied within a minimum of 100 feet to a source of drinking water, springs, wells, reservoirs, etc. Distances may be extended based on field conditions.

Vegetation management within sensitive buffers will consist of manually cutting or mowing all capable tree species.

All wetlands will be maintained in accordance with Federal and State regulations.

Guidelines specific to foliar herbicide applications are found under herbicide application.

Applicators are required to wear the personal protective equipment (PPE) specified on the herbicide manufacturer's product label.

Cut stump treatment (CST) is the herbicide mixture applied to hardwood tree stumps to prevent resprouting. The Company specifies that CST be applied to the cambial ring of the cut surface or root collar. The CST will be mixed with a marking dye. CST applications are

to be made immediately after cutting a tree.

5.1 General Work Requirements

Crew foremen will record daily work activities, labor hours, and equipment hours on a hand held computer provided by the Company. Electronic files will be transmitted by the contractor to COMPANY's Augusta, Maine General Office at the end of each week. The CONTRACTOR will notify the Company daily of the crew location by section and pole number.

All complaints and refusals for work are to be documented on Form 2928, which will be supplied to the contractor.

The CONTRACTOR is to maintain the full width of the cleared ROW.

Where the specified section is adjacent to another transmission section in the same ROW, vegetation maintenance will extend to the midpoint between the two transmission sections. The midpoint is half the distance from the centerline of one transmission section to the centerline of the adjacent transmission section.

The Transmission Utility Arborist must approve any trees left inside the cleared ROW. All vegetation maintenance (cut, spray, screen, and trim) scheduled for a cycle will be completed in the same calendar year.

Work hours for bid projects will be limited to Monday through Friday with an option for Saturday work. For time and material projects, contractor crews may work 40 hours per week, i.e. 4-10 hour days.

CONTRACTOR crews are not to work on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas, except to restore power.

Crewmembers are not to leave litter (food wrappers, soda cans, empty herbicide containers, etc.) in the ROW.

The preferred method for accessing a transmission ROW is at road crossings. Established access roads or trails are generally acceptable as an alternative choice. However, crossing private land without permission to access the ROW is a cause of landowner complaints. It is the contractor's responsibility to obtain landowner permission to cross private land.

Many ROWs contain fences and gates. If opened by the crew, all gates or fence openings must be closed before leaving the site.

ROW stream and wetland crossings are considered sensitive locations. The following requirements apply to contractors and streams/wetlands:

- The CONTRACTOR shall employ all necessary precautions to protect the waterway from pollution caused by vehicular movement or disturbance to the streambed and banks.
- The CONTRACTOR shall ensure that vehicles crossing streams/wetlands do not spill or otherwise contaminate the crossing with herbicide or other materials, i.e. gasoline, diesel, oil, etc.
- The CONTRACTOR shall contain vehicle crossings of streams and wetlands to one location.
- The CONTRACTOR shall limit the number of times any one stream or wetland is crossed with vehicles to the minimum number necessary for completion of the work.
- The CONTRACTOR shall be responsible for repairing any damage such as deep ruts that could cause erosion.

CONTRACTOR vehicles used for ROW travel should be limited in size to avoid damaging

the ground, plants, and streams/wetlands. ATVs are the preferred method for transporting herbicide mixtures and equipment in the ROW. Larger four-wheel drive trucks are not suitable for travel up and down the ROW; however, trucks are acceptable for use on suitable access roads. Tracked vehicles, such as lift-mounted bombardiers, are acceptable for side trimming maintenance. Due to underground utilities within COMPANY ROWs, large rubber-tired vehicles, such as lift-mounted skidders, cannot be used.

Safety glasses are to be worn at all times.

Hard hats and chaps are to be worn whenever cutting or trimming trees and brush.

CONTRACTOR must read and follow all herbicide labels.

Review MSDS sheets for products used.

All trees that pose a threat to the power lines or do not meet COMPANY specifications for that voltage class are to be documented on the Daily Work Report.

5.2 Inspections

Annually one fourth of the system will be inspected using a ground survey. At that time all vegetative buffers will be surveyed and any obvious danger trees will be recorded. The edge of the ROW will be inspected for danger trees and encroaching branches.

The annual helicopter patrol will report immediate danger trees to the vegetation management department. Danger trees will be documented in writing.

5.3 Screen Maintenance

Vegetation Screens should consist of low growing shrubs that will not grow into the conductors.

Select screens may consist of a mix of hardwood or softwood trees at major road and river crossings that are trimmed or on a periodic basis may be removed. Screen will be maintained in areas where they are absolutely necessary, otherwise screen will be removed. A road crossing screen provides a visual barrier, while a river or stream screen is usually intended to be a herbicide-free buffer between the ROW and the water. New screens may be established as part of new construction projects when required.

The tree height may vary from the middle of the ROW to the edge depending on conductor sag; however capable tree species are to be removed from the wire zone.

The depth of the screen should be as shallow as possible, generally consisting of no more than 1 or 2 rows of trees. Some trees may have to be removed if the tree density is inhibiting light penetration and causing sparse growth. Trees that threatened electric reliability will be removed.

Hardwood trees growing within a softwood screen must be removed. Dead or dying softwoods must be removed.

Hardwood and pitch pine stumps are to be treated with a CST, whenever environmentally acceptable to prevent resprouting.

Screens should be removed because they are either unnecessary or have lost their effectiveness as a visual barrier or buffer. Screen removal will be approved by the Transmission Utility Arborist.

Brush and small wood resulting from roadside screen maintenance must be chipped. If the brush cannot be chipped, the Transmission Utility Arborist will be consulted regarding other methods, such as burning or piling. Brush and wood left on site must comply with the Maine Slash Law.

5.4 Transmission Conductor Clearances

Minimum clearance between all capable tree species and wires at time of vegetation

management work on table 1. Distances may be increased based on topography, length of span or other environment.

Table 1

Voltage	Minimum Vertical Wire clearance (feet)
34.5 kV	15
69kV	15
115 kV	20
345 kV	25

Minimum clearances are designed to prevent flash over between vegetation and overhead ungrounded supply conductors. At no time will vegetation be allowed to grow closer than distance listed on table 2.

Table 2

Voltage	Minimum Wire clearance (feet) *
34.5 kV	3
69kV	3
115 kV	4
345 kV	10

* Based on IEEE 516-2003 table 5 and increased to the next whole number.

5.5 Side Trim Maintenance

Side trimming is the practice of pruning or removing trees along the edge (sides) of a transmission ROW. COMPANY's ROW width is determined either by ownership or easement. The goal is to maintain the full ROW width, or reestablish the original cleared ROW width. Side trimming is accomplished with either a climbing crew, mechanical tools, or an off-road bucket crew.

Branch pruning to achieve sufficient line clearance is ordinarily the last course of action. Removing the tree is preferred over pruning because it usually will reduce long term maintenance costs and minimize power outage risk.

Hazardous trees with the potential to hit the conductors must be removed. Hazardous trees are edge trees that pose an obvious threat to overhead conductors - dead trees, unsightly trees after pruning, unhealthy trees, trees with weakened crotches and trees leaning over or towards the wires. Stumps shall be no taller than six (6) inches tall.

Trees that may not survive extensive pruning should be removed.

COMPANY will document and track all areas containing trees that do not meet COMPANY FOP 400 specifications.

The Transmission Utility Arborist will be consulted regarding the removal of hazardous trees outside of the ROW boundary or road limit.

Hardwood stumps are to be treated with a CST, whenever environmentally acceptable, to prevent re-sprouting.

Brush and wood resulting from trimming and removals is to be left in the ROW in compliance with the Maine Slash Law. Large amounts of brush must be burned, chipped, or removed.

5.6 Tree and Brush Removal Prior to Herbicide Applications

Preparatory cutting is the practice of manually removing trees in a ROW on a cycle in preparation for the subsequent herbicide application.

Preparatory cutting will take place between April and May, or prior to foliar herbicide application.

Stumps will be cut as flat and as low as possible, less than six (6) inches tall. The resulting slash should lie as flat as possible to comply with the Maine slash law.

There are to be no remaining live branches attached to the stump of a softwood tree after it was removed.

Hardwood stumps and pitch pine stumps are to be treated with a CST, whenever environmentally acceptable, to prevent resprouting.

All hardwood tree species over eight (8) feet tall will be cut, and the stumps will be immediately treated with a CST herbicide.

All softwood trees species over one (1) foot tall will be cut. The remaining stump will have no live branches. Incorrectly cut softwood trees will result in withholding of payment until the trees have been correctly cut.

Due to low conductor height and/or invasiveness, tall shrub species (alder, buckhorn, autumn olive, etc.) may have to be cut and/or treated.

The full cleared ROW width must be maintained.

Distribution circuits within a transmission ROW are to be included when maintaining the transmission section next to the distribution line. This is considered part of the work for the scheduled transmission section.

Trees and brush near tower bases and switch platforms, and vines on poles/towers or guy wires are to be cut and treated with CST.

5.7 Herbicide Application

Foliar applications of herbicides are made on a periodic basis employing the low volume foliar application method. This technique uses 3-5 gallon, non-motorized backpack sprayers (such as Birchmeir or Solo) to selectively apply the herbicides to target species. Motorized backpacks, such as mistblowers, are prohibited.

Foliar spraying will take place between early June and end of August.

Any tree or shrub species capable of interfering with conductors, structures, tower bases, guys, etc. will be controlled with an herbicide application.

The Transmission Utility Arborist may specify that certain shrub species (alder, buckhorn, etc.) be treated to maintain open access to the ROW.

Foliar herbicide applications must control 100% of all tree species over six (6) feet tall capable of interfering with conductors, structures, tower bases, guys, etc., and at least 95% of all capable species under six (6) feet tall.

The CONTRACTOR will re-treat, at their expense, areas where the Transmission Utility Arborist finds ineffective control due to application technique. Failure to do so will result in withholding of payment.

Herbicide applications will stop when wind is capable of moving the spray mixture off the ROW. Spray pressure will be kept as low as possible to reduce drift. Maine drift regulations prohibit spraying when the wind speed is over 15 mph.

All herbicide applications will be stopped during rainfall or when rain is imminent. If spraying is interrupted by rain, the crew will resume treatment at a point prior to where rain started.

Avoid foliar herbicide applications near yards, gardens, pools, and where humans or animals are congregating. These situations will require manual cutting and where appropriate a CST will be applied.

All herbicide mixes and rates will be approved by COMPANY.

Crew foremen are required to post all public road crossings with a sign provided by COMPANY that identifies the date of the foliar application and the product used. Crew is instructed to put the post on the first pole of the area requiring herbicide application. All new transmission sections after construction must be scheduled for a foliar herbicide application during the following growing season and charged to the original work order. All significant chemical spills must be reported to COMPANY Arborist or Manager of Vegetation Management Operations, Maine Department of Environmental Protection, and Maine Board of Pesticide Control. Off-hour calls should go the COMPANY Communication Center (207- 622-7421 or 622-7671). All chemical spills resulting in an environmental impact must be reported to COMPANY Environmental Department the next business day.

5.8 Approved Herbicide List

Application Method

Herbicide

Foliar spray

Accord concentrate 4% @ plus Arsenal .25% plus surfactant in water*

*The Accord + Arsenal mix cannot be used in pastures.

Krenite @ 5% plus surfactant in water

Krenite @ 3% plus escort (3 ounces per 100 gallons of mix plus surfactant in water

Cut stump treatment

Garlon 4 @ 20% plus oil (basal or non-petroleum carrier)

Garlon 4 @ 25% plus Stalker @ 1% in oil (basal or non-petroleum carrier)

(Mix 1 gallon of Garlon 4 plus 5 oz. of Stalker in 3 gallons of oil)

5.9 Emergency Communication with System Operations

In the event that trees have grown to such a height that a transmission line when carrying the emergency rated capacity will likely sag into trees, the person making this observation will immediately contact the transmission arborist who will contact the Manager of Vegetation Management Operations. The Manager of Vegetation Management Operations will contact the System Operations. The System Operations will monitor the line flows and make adjustments to the noted section of line until the tree can be removed. If any person is not available the field personnel will directly contact System Operations at (207) 622-7421 or (207) 622-7671.

6. COMPANY DISTRIBUTION ELECTRIC SYSTEM MAINTENANCE

COMPANY requires a minimum of fifteen (15) feet of clearance above primary and neutral conductors at the time of pruning. Branches extending over conductors should have enough clearance to swing if broken without contacting these wires. The clearances do not change for different conductor types.

COMPANY requires a minimum of eight (8) feet of clearance to the side of primary and neutral conductors to ground level at the time of pruning. The tree and branch clearances do not change for different conductor types. Large sturdy trees that do not pose a hazard to conductors can remain within this zone provided side and overhead limbs have been removed.

COMPANY requires that a minimum of ten (10) feet is pruned below the lowest electric wire

(primary, neutral, or secondary wire) in locations where full limb removal is limited. These branches are removed to a minimum of eight (8) feet to the side. Sturdy mature limbs which are a minimum of ten (10) feet below the lowest electric wire which do not pose as hazard to the conductors may remain provided re-sprout growth has been removed and eight (8) feet of side clearance is obtained for the entire limb. Smaller limbs below ten (10) feet will be cut to the ground level so that vegetative shelves are not created or maintained. Crew judgment may be required in developed areas; when possible taper lower branches back towards woods edge to improve efficiency of wire restoration.

COMPANY requires ground cutting of all capable tree species and edged tree must be combined with either a CST or follow up foliar treatment where environmentally acceptable, 100 % capable tree species over two (2) feet tall shall be cut at ground level. Stumps shall be no taller than 6 inches. The intent is not to lose the existing ROW, in situations where the ROW is wider than the current distribution specifications; the COMPANY arborist must be contacted.

COMPANY requires that tree crews remove or cut to safe height danger trees that pose an obvious threat to overhead conductors, dead trees, unsightly trees after pruning, unhealthy trees, trees with weakened crotches and trees leaning over the wires. All these edge trees are included in the routine preventive maintenance program, (including standard work units).

Work is subject to company and landowner authorizations if trees are outside road limits or easements. If tree is removed the stump height will be no taller than six (6) inches.

Off ROW danger trees are to be removed or cut to a safe height in woodlots, as part of routine maintenance vegetation management work (when trees greater than 30.1 DBH must be removed, contact the COMPANY arborist). Off ROW danger trees that pose a threat to overhead wires, include dead trees, unhealthy trees, diseased trees, trees with weak crotches, trees leaning over wires, or trees that are unsightly after pruning. Trees beyond the road limits or outside the easement require landowner permission. Off ROW trees are to be four (4) inches in diameter at breast height and stumps can be no taller than six (6) inches above the ground.

COMPANY requires a minimum of two (2) feet of clearance around secondary conductors and service drops at the time of maintenance or construction pruning. Capable tree species directly under cable should be removed rather than topped. Overhead branches should be shortened or removed to prevent contact with wires. Trees or limbs rubbing on or deflecting the service conductor will be removed at the time of maintenance pruning or at direction of COMPANY arborists.

COMPANY Utility Arborists will review all requests for tree work. Since all services are trimmed when the primary is pruned only emergency service trim work will be performed. All tree work adjacent to service drops will be deferred until that circuit is being trimmed on maintenance.

Tree crews should identify and may remove danger trees that pose an obvious threat to overhead conductors when trees are well outside the road limits or easement, in which case COMPANY approval is required. The landowner must be contacted prior to starting work. Utility Arborists will meet with a representative of the municipality, state, and other interested utility representative to inspect and mark those trees which are considered suitable for contribution. In the absence of a municipal tree program, if a hazardous tree condition exists and must be removed; contributions should be solicited from all interested utility parties benefiting from the removal. COMPANY will arrange for joint telephone or CATV

work invoicing that will be billed through the exchange of notice process.

All hangers must be removed and properly disposed.

An analysis for each tree removal will be made considering costs and benefits, including reliability and future cost savings.

All crews shall be instructed to refer requests for private tree work to a supervisor while working for COMPANY.

All pruning work is to be done in accordance with accepted utility arboricultural and techniques and ANSI 300 standards.

Limbs should be pruned back to a lateral branch that is at least one-third the diameter of the removed limb or back to the main stem of the tree, whichever is more appropriate. Leaving stubs is not an acceptable arboricultural practice.

When working roadside, the CONTRACTOR shall promptly remove or chip the brush resulting from removals and trim operations. Large wood over three (3) inches in diameter may be left on site, in accordance with Maine Slash laws.

When landowners request maintenance tree work and whose property is outside of the Company's scheduled line clearance maintenance program, the Utility Arborist will define the parameters for clean up if the arborist agrees that the work is to be done.

Approved methods of slash disposal will meet or exceed standards established by Maine Slash laws.

The CONTRACTOR will treat all stumps capable of resprouting with an approved herbicide to prevent regrowth from the root system where environmentally acceptable. Treatment is to be applied within one (1) hour after cutting. The contractor is to follow all label requirements. No treatment is to be applied within a minimum of twenty-five (25) feet of surface water or within a minimum of one hundred (100) feet of drinking water supplies. Herbicide applications properly prescribed and applied are an effective method of controlling species capable of growing into the power lines. Areas that are ground cut in one year should be treated with foliar application the following year. Efforts should be made to coordinate these applications with state and local highway departments. (See herbicide application section for more detail)

Locations where landowners refused tree work will require a follow up visit by COMPANY Utility Arborist who will attempt to negotiate proper clearance. If customer refuses tree work a Form 2928 must be completed on the COMPANY system. COMPANY will arrange to prune limbs within the public way or easement.

Tree growth regulators are chemical tools which slow the rate of branch growth between nodes. TGR's are a tool that may be used to extend the trim cycle on selected trees.

Roadside screens may be allowed, provided the height meets COMPANY clearance specifications. The height of screen shall not exceed 10 feet tall and shall be accessible to aerial trim units.

7. COMPANY Hazard Tree Program

The Hazard Tree Program is designed for circuits or segments of circuits that were cleared within the previous five to six years and are experiencing a high number of tree-caused power outages.

Hazard tree work should start at the substation, primary feeders are worked first.

A list of circuits or segments of circuits identified by protective devices will be developed using the most recently available data. The list may be adjusted, as new data becomes available throughout the year.

Using the tree-caused outage data, field observations and other inspection information, each arborist will select areas to employ for the hazard tree program in their service center of responsibility.

Approximately 30% - 35% of the hazard tree budget will be set aside for individual trees that are identified as removals during the year; the remaining funds will be used on the selected circuits.

The objective of the Hazard Tree Program will be to reduce overhanging branches and focus on danger tree removal. The tree crews will be instructed to clear to the maximum aerial lift working height and remove large trees that are outside the standard clearance zone that pose an unreasonable risk to overhead conductors. The COMPANY arborist will review the enhanced tree work with municipal officials and adjust work specifications as necessary. For example the overhang may be tapered back towards the tree rather than branch removal. The removals outside the public way or easement will require landowner's notification/permission.

Trees targeted for removal that are hazards to COMPANY's lines as determined by a COMPANY arborist are generally dead trees, trees in decline, trees with weak or damaged crotches, uprooted trees, trees that are storm damaged, diseased trees or species known to have a high failure rate.

7.1 Vegetation Management Rules and Regulations

All federal, state, municipal and tribal ordinances must be observed.

Key laws and standards:

Maine Pesticide Control Act W7 M.R.S.A. 606 (2)(G).

OSHA 1910.269

ANSI Z.133.1

ANSI 300A Pruning Standards

NAA Pruning Standard

Pruning Trees Near Electric With Electric Utility Lines (Dr. Alex Shigo)

National Electric Safety Code (Section 218)

Central Maine Power Company Safety Manual

"An Act to Expedite Maintenance of Utility Facilities" (S.P. 346 - L.D. 1041). This law sets guidelines for COMPANY and other Maine utilities to trim trees, remove trees, or remove portions of trees located within the public right-of-way subject to proper consultation with abutting landowners who are listed on the appropriate contact log.

"An Act to Create the Overhead High-Voltage Line Safety Act" (H.P. 894 - L.D. 1247). This law states that only qualified line clearance arborists can work within ten (10) feet of energized conductors.

"An Act to Amend the Laws Relating to Slash Disposal Along Highways and Railroad and Utility Corridors" (H.P. 1445 - L.D. 2066). This law establishes the guidelines to manage brush and wood resulting from line clearance operations.

7.2 Telephone or Joint Work Agreements

All efforts should be made to secure cost-sharing with other parties benefiting from line clearance operations that have facilities attached to the same pole plant being considered for routine vegetation maintenance. This should also include provisions for hazardous tree removals.

Joint Use of Plant staff will arrange exchange of notices and provide all authorization numbers to the Utility Arborists, for tree work, where shared billing has been approved.

7.3 Service Requests

All requests by customers for tree-related work shall be reviewed by the Utility Arborists. Wood clean up is generally the landowners responsibility for service requests. After service requests are generated on the work management system and are evaluated by Utility Arborists, the tree work will be scheduled, the request denied or tree work may be deferred due to workload or scheduling conflicts. Once an assignment for work is made, the Utility Arborist is responsible to update the data base.

7.4 Trenching and Tunneling

All trenching or tunneling performed by COMPANY will follow guidelines established in the publication "Trenching and Tunneling near Trees" edited by Dr. James R. Fazio.

8. CONSTRUCTION SPECIFICATIONS AND PROCEDURES

Construction line clearance is the tree removal, trimming and herbicide application necessary for the construction of line extensions, betterment projects, road jobs, and telephone coordination projects. Specifications are the same regardless of conductor type. A minimum of eight (8) feet side clearance and a minimum of fifteen (15) feet overhead clearance from the electric wire, clear all branches to the ground below the lowest electric wire. All capable tree species shall be removed from the clearance zone at the time of pruning, and herbicides will be applied either as a C.S.T or follow up foliar treatment. The clearance zone may extend beyond the conductors when conditions dictate.

COMPANY requires a minimum of two (2) feet of clearance around secondary conductors and service drops at the time of maintenance or construction pruning. All underlying growth that is capable of growing into these lines must be removed, unless the landowner requests trees be left, which the crew will record span as limited clearance. Overhead branches should be shortened or removed to prevent contact with wires.

COMPANY requires removal of as many edge trees as possible. These are trees that pose an obvious threat to overhead conductors - dead trees, unsightly trees after pruning, unhealthy trees, trees with weakened crotches and trees leaning over the wires. Work is subject to company authorization, if trees are located outside road limits or easements.

All woody vegetation should be cleared from the pole line area in order to maximize construction efficiencies, as much as practical.

All hangers should be removed and properly disposed.

New pole line locations should be designed such that the Company can minimize current and future maintenance trim costs, and whenever possible, new lines must be accessible to aerial lift equipment. These lines should be scheduled for a foliar herbicide application during the year following construction, (budget dependent).

The service center personnel (field planners) or service workers are required to enter the trim portion on the work management system for all construction line clearance work. This notice is sent to the Utility Arborists when the design work is complete. All information pertinent to the job shall be included, such as location of any access roads, names of abutters, fire roads, or special concerns.

Special agreements that alter the established clearance standards should be utilized only as a last resort. Limited tree clearances will not be accepted because they reduce reliability and increase future costs. If a special agreement is required all information must be recorded on the work management system and forwarded to the Utility Arborist.

The Utility Arborist will issue the work to the CONTRACTOR supervisor or crew foreman, and update the work management system.

The service center must notify the Utility Arborist a minimum of three (3) working days prior to installing the conductor once the poles have been set. For planning purposes allow one day of tree work for every span of new work.

When the tree crew has completed its assigned construction project the foreman or supervisor will notify COMPANY personnel by the next business day. The Utility Arborist will notify the line department by updating work management system.

In general contract line clearance crews should complete the tree work prior to arrival of line crews.

CONTRACTOR will cooperate with the company to complete work by the Customer Service Guarantee (CSG) date.

Construction work invoicing and work quality is approved by the Utility Arborists.

8.1 Clearing Rights (Contracts, Easements, and Agreements)

The property owner shall provide the Company with written permission (using a standard easement form) which grants removal, trim and treatment rights before any tree work is started. The form shall be recorded as an easement. (Form #1199)

The Company does not purchase clearing rights. If clearing rights must be purchased, the customer shall reimburse the Company as an excess and unusual cost. The grantor (landowner) shall be fully informed, by the COMPANY personnel, that the costs are borne by the customer and not the Company.

If the treatment rights granted by the easement are objected to, an agreement for Right-of-Way Vegetation Control Form # 2937 (Landowner Maintenance Agreement) with an attached Property Location Form must be completed. This agreement makes the customer or grantor of the easement responsible for maintaining line clearance according to the specifications of this right-of-way vegetation agreement, otherwise the treatment clause of the easement becomes applicable.

It is not acceptable to cross out any words or terms contained in either Form #1199 or Form #2937.

8.2 Developer Projects

The developer is responsible for providing a suitable right-of-way for pole line construction within a new development. The service center shall not accept responsibility for construction line clearance other than the light aerial trimming which becomes necessary subsequent to the line construction. The service center shall inform the developer of Company line clearance specifications to ensure that the right-of-way is adequately cleared.

9. STORM RESTORATION

Vegetation Management Department will actively support all power restoration efforts. In general, the line departments will coordinate restoration activities in each service center.

All costs will be charged to an established SAP cost collector. Special work orders may be opened for major storms.

Storm work will consist of all tasks required to restore power and the associated follow-up work necessary to remove immediate threats to utility facilities.

The Utility Arborists will dispatch crews normally assigned to the service center and notify the Manager of Vegetation Management Operations.

All crew movements between service centers will be discussed with Manager of Vegetation Management Operations and the Director of Electrical Maintenance Engineering or the Director of T&D Operations.

Crews may be placed on standby if severity of storm warrants it. Crews should be fueled and

fed while on standby.

Tree crews from out of state may be used to assist in the restoration effort after the Director of T&D Operations authorizes the request.

The Company shall not perform tree work beyond that which is necessary to erect lines during severe storms such as hurricanes, snow storms, or tornadoes. Tree work necessary in areas beyond the restoration of lines shall be the responsibility of the municipality or property owner.

Tree work shall be performed by contract crews with established contracts. Under extreme conditions tree service contractors who do not hold negotiated agreements with the Company may be employed with the approval of the Manager of Vegetation Management Operations to ensure the contractors meet COMPANY guidelines. If this situation occurs, experienced Company personnel shall be assigned to assist the foreign crews in the field.

All outside crews will report to a staging area where COMPANY policies and procedures will be

explained. Data sheets for each crew will be filled out by the staging coordinator.

All companies sending crews to COMPANY must send proof of insurance, rates, and proof they are qualified to work near energized power lines.

All crews will report daily time, and work locations which will be noted by town, road, and pole. This will facilitate the coordination or shared restoration costs with telephone and cable TV companies. Start and stop time is to be recorded in the comments field.

All vendors must have a valid purchase order.

The Company will arrange for lodging and meals of all tree crews not assigned to that area.

Tree crews should eat on the same schedule as line crews.

Tree crew must be released at end of each day by COMPANY Utility Arborist or a COMPANY representative.

Crews will be released from the service center after coordinating crew movements with the General Office.

The Company or crews contracted by the Company will not perform wood clean up or brush removal of any debris resulting from storm or the associated restoration effort.

All tree crews will follow the COMPANY storm schedule work day.

See COMPANY APM publication for restoration daily maximum work hours.

10. RECORD KEEPING

Daily work reports (DWR) comprise an electronic system used to invoice and track all crew production.

Each day the CONTRACTOR tree crews will record their production data, labor and equipment hours in a hand held computer (HH) per COMPANY representatives. Crew production for the day is referenced by town, road, and pole or GIS point.

Weekly the tree crews must record their work and transfer this information electronically to the Augusta General Office (GO). This information is transferred to each Utility Arborist's computer. The Utility Arborist then checks the work for accuracy and corrects any discrepancies. Once corrected, the crew's time reports are transmitted to Augusta where an invoice and work detail report is prepared, and then approved by the Utility Arborist. After the Utility Arborist has returned the invoice approvals, Accounts Payable will be authorized to send payment to the appropriate contractors within 30 days of invoice date.

View Flowchart. in FOP 400.

10.1 Contractor Crew Analysis Report - Form 2920

The three-part contractor crew analysis report is designed to document the observations of the Utility Arborist's periodic crew visits.

The report covers topics such as work quality, safety, tools and equipment. Routing of the documents is as follows:

- Copy 1 - Green – Utility Arborist
- Copy 2 - White - Contractor
- Copy 3 - Pink - T & D Line Clearance Copy

The contractor's copy is to be reviewed by the contractor supervisor with the crew periodically.

10.2 Spray Crew Analysis - Form 2921

To be filled out during field inspections to document crew audit. A copy is sent to contractor supervision.

10.3 Quarterly Tree Crew Evaluation

Quarterly crew production figures are to be recorded on the quarterly crew evaluation form. Statistics may include dollar cost per section, number of trees trimmed, cut and number of services trimmed, herbicide application percentages.

Copies of this report are to be distributed to the Manager of Vegetation Management Operations and contractor crew supervisor. The contractor crew supervisor and Utility Arborist will review the results with each individual crew.

10.4 Contractor Caused Outages

Contractor caused outages will be documented on electronic Form 2928.

A copy of the report shall be sent to the Manager of Vegetation Management Operations and Vegetation Management Safety Chairman.

10.5 Complaint Forms

Complaints, objections, limited trim and refusals will be documented electronically on Vegetation Management Form 2928.

In all situations the CONTRACTOR and line clearance Utility Arborist shall reach a resolution to the complaint or dispute and record the outcome on the Form 2928.

A copy of the report should be retained by the Utility Arborist and one should be sent to the Manager of Vegetation Management Operations. Serious complaints should also be forwarded to the operations manager.

In all cases, refusals or limited trim shall be recorded in the appropriate handheld. The Utility Arborist will contact each refusal and attempt to negotiate a resolution.

10.6 Damage Claims

If a property owner or abutter reports damage due to a vegetation management activity, the person receiving the complaint shall notify the Utility Arborist and contract supervisor immediately. In turn the Utility Arborist will notify the Manager of Vegetation Management Operations by completing a report Vegetation Management Form 2928.

The contract supervisor will contact landowners with property damage or clearing complaint within 24 hours of being notified of a problem.

As soon as possible, the complainant will be contacted and the resolution will be documented.

Compensation for damage shall be determined by Utility Arborist and CONTRACTOR supervisor if situation warrants it.

10.7 Safety and Accident Reporting

A safe workplace is paramount to the performance of the COMPANY and tree contractor

partnership.

Vegetation Management personnel shall not attempt to remove branches, limbs, hangers, etc. if this material is on two (2) or more phases (Ø). Should this occur, tree crews are to call COMPANY and let line personnel determine if the circuit must be de-energized prior to removal of the limb/branch. CONTRACTOR personnel may continue to remove this material when it is on only one (1) phase (Ø) or from the neutral, but every effort must be made to eliminate contact with the conductors by utilizing proper cutting, trimming and roping techniques. COMPANY Accident Prevention Manual (December 2002) Page 85. When tree contractors are utilized to assist in restoration efforts the following shall apply: When tree clearing is done from the ground, a qualified line worker shall create a visual opening at the disconnecting location and install a tag. The lineworker shall then test and ground the line on both sides as close as practical to the work location. For accidents requiring medical treatment CONTRACTOR supervision shall complete a contractor medical treatment form and send it to Augusta, a copy is sent to Vegetation Management Safety Chairman for review. All accident forms must be filled out by contractors and sent within 3 working days to COMPANY. COMPANY Risk Department will track and file MPUC reportable accidents.

10.8 Quarterly Authorization Form

Form 2981 allocates the dollar amount per purchase order number on a quarterly basis to each contractor within each service center. This form is completed by the Utility Arborist and sent to the Manager of Vegetation Management Operations. Any monies not spent during any of the first three quarters will automatically be carried over to the next quarter. Monies cannot be carried from one years' budget to the next.

10.9 Landowner Maintenance Agreement

COMPANY offers landowners and abutting landowners this option, commonly referred to as a No Spray Agreement, when they object to the use of herbicide on the transmission ROW. The landowner agrees to maintain, at their cost and to our specifications, the vegetation in the COMPANY ROW. Contractor crews will be notified of these locations, and they are not to cut or spray the brush within the ROW corridor. The contractor will still perform all side trimming and screen maintenance within a No Spray Agreement location. However, no herbicide, such as CST, is to be used by the contractor.

The Utility Arborist should meet with the customer and define the agreement. Once it is signed, a copy should be retained by the Utility Arborist, another sent to the Manager of Vegetation Management Operations for corporate records.

10.10 Customer Contact Log

Customers who wish to be notified prior to line clearance activities on their property can be placed on the company contact log.

The log is indexed by town, road, and pole number.

Upon receipt of the customer's notification request, their name is entered on the customer contact log. Copies of their registry can be found in Augusta as well as the respective Utility Arborist office.

The information maybe entered in each crew's hand held computer for the CONTRACTOR's access.

10.11 Authorization Checklist - Form 2922

An Authorization Form 2922 will be issued to the CONTRACTOR supervisor and foreman before beginning work on a transmission section. This form specifies herbicide mixtures and

rates, and also includes pole locations of known sensitive sites.

10.12 Field Evaluation Survey Report No. 2932

Areas which have been ground cut and/or trimmed or treated with a foliar application should be evaluated to see that the clearance specifications have been met. Cleared areas should be inspected for reasonable neatness, brush disposal, and wood clean up.

The Utility Arborist shall prepare an evaluation sheet once per month (per contractor) to summarize the number of sections surveyed and notations of line clearance problems. A copy shall be forwarded by Utility Arborist to the appropriate contractor and the Manager of Vegetation Management Operations.

10.13 COMPANY Vegetation Management Contractor Crews and Non-Compliance & Safety

In the event that a tree crew does not meet COMPANY's minimum standards they will be removed from the COMPANY system.

The following categories will be monitored monthly by COMPANY arborists:

Production – see Section 10.3

Quality of tree work, clearance, hazard tree removal and clean up.

11. SUBSTATION WEED CONTROL

COMPANY must manage all vegetation within substations to reduce risk of fire, power outages, and personal injury. The most cost-effective tool to accomplish this objective is the use of herbicides. Herbicides are applied periodically to each substation and provide the vegetation control necessary to protect the integrity of electrical service. COMPANY has designed the program to protect surrounding areas from unplanned herbicide applications. All state and federal laws and local ordinances must be followed (see regulatory section).

11.1 Obligation of Contractors

The CONTRACTOR shall furnish all supervision, labor, tools, equipment, chemical materials, water, and transportation necessary to meet the contract specifications.

The Contractor shall:

Arrange for daily consultation with the Company Representative, advising the representative of the work locations and work planned for the following day.

Treat all substations and fence lines and other areas designated for treatment in accordance with these specifications.

Provide a full time, on-site, crew with at least one person possessing a valid Maine pesticide applicator's license in the right-of-way category. (6D)

Report immediately to the Company any inquiry, complaint, or claim received during the course of the work.

All CONTRACTOR personnel shall wear hard hats and safety glasses with side shields while working on Company property.

All significant chemical spills must be reported to COMPANY Arborist or Manager of Vegetation Management Operations, Maine Department of Environmental Protection, and Maine Board of Pesticide Control. Off-hour calls should go the COMPANY Communication Center (207-622-7421 or 622-7671). All chemical spills resulting in an environmental impact must be reported.

11.2 Obligation of Company

The Company shall:

Authorize in writing to the CONTRACTOR any change in the scope of the work.

Approve the chemical formulations to be applied.

Provide a Company "Qualified Electrical Worker" who shall accompany the CONTRACTOR during the performance of work described in these specifications and provide access into restricted areas. The Company "Qualified Electrical Worker" will only be available during regular company hours, unless otherwise agreed upon by the Company and CONTRACTOR.

11.3 Access to Company Facilities

The Company shall provide a Company "Qualified Electrical Worker" whose responsibility it will be to accompany the CONTRACTOR and provide access into all facilities where work is to be performed. Under no circumstances shall the CONTRACTOR enter any facilities (having restricted access) when the Company "Qualified Electrical Worker" is not present.

11.4 Method of Application

Pre-Emergent and Post-Emergent Applications Made Inside the Substation Fence:

The spray formulation shall be applied through a properly calibrated hydraulic sprayer. The applicator will use a bare ground application gun to apply the herbicide. Spray applicators shall evenly distribute the spray material over the area to be treated. Each successive application pattern shall overlap the previous application pattern to avoid untreated strips. The spray applicators shall apply the spray material to the foliage of vegetation to be controlled. Spray coverage shall be uniform and complete.

Pre-Emergent and Post-Emergent Application Outside the Substation Fence:

The spray formulation shall be applied in the same manner described above using a non-motorized backpack applicator. A two-foot band outside the fence shall be treated.

11.5 Timing of Application

Herbicide application will take place between May 1 and June 30. Post-emergent herbicides shall be applied to actively growing plants.

11.6 Treatment Specifications

All application equipment will be tested and calibrated before work starts.

The spray gun will be bare ground application gun and adjusted to deliver the largest droplet size possible.

Before applying herbicides at each site, crew foreman will review the site map, identify sensitive areas to the crew, and note new sensitive areas on the map, which will be returned to the Company.

Buffer zones will be used to protect sensitive areas.

- A minimum 25 foot no spray zone along water.
- A minimum 100-foot no spray zone will be maintained on all drinking water supplies.
- Hand pressurized equipment will be used in substations adjacent to sensitive areas allowing 50' distance to sensitive area.

Motorized equipment will be limited to areas inside the fenced area.

All treatments outside the fence will be treated with non motorized equipment.

Spray gun will be directed as close as possible to the ground.

Applicator will immediately stop spray activities in the presence of people in close proximity of the fence and advise them to move.

At the time of application the area to be treated shall be vacant of all persons except those making the application. If an area to be treated is occupied at the time the CONTRACTOR intends to treat the area, the CONTRACTOR shall postpone treatment until the area is vacant.

All spray applications will cease if wind is likely to carry spray droplets out of target area. All activity will cease once wind speed reaches 15 MPH. The CONTRACTOR shall take all precautions to protect desirable vegetation on Company property and on adjacent property from damage resulting from these operations. All spray applications will cease in heavy rain or if heavy rain is likely within one hour. All gates used to access substation will be posted with signs stating date of application and products applied. A low drift agent will be used in all tank mixes. Application crew will maintain a spray log for all applications. The spray log will be submitted to COMPANY at the end of the project. All mixing of herbicides will be conducted in substation or at contractor facilities. Read and adhere to all labels before starting work. Review MSDS sheets.

11.7 Damages

The CONTRACTOR shall be liable for all damages to Company property resulting from these operations.

11.8 Guarantee

The CONTRACTOR shall guarantee that treated areas shall be essentially free of any living plant growth for one year. The CONTRACTOR shall retreat all areas exhibiting less than satisfactory control.

11.9 Herbicide Mixtures

Non-landscaped substation:

- Karmex DF @ 6 lbs/acre
- Oust Extra @ 3.5 oz/acre
- Accord XRT @ 3 qts/acre
- Low drift agent

Landscaped substation:

For a substation with trees and shrubs planted near the outside perimeter of the fence, the majority of the fence interior can be sprayed with the non-landscaped mix. When spraying inside the fence within 20 ft. of landscape plants, however, the landscaped mix must be used. Also include buffer zones near sensitive areas (excluding drinking water area where no herbicides are applied).

- Accord XRT @ 3qts/acre
- Pendulum 3.3 EC @ 2.4 qts/acre
- Low drift agent

Outside Fence:

- Accord XRT @ 3qts/acre
- Pendulum 3.3 EC @ 2.4 qts/acre
- Low drift agent

11.10 Substation Site Maps

These drawings are prepared to show sensitive areas around each substation.

List of Sensitive Areas to be included on a Substation Site Map:

- Residential buildings, together with any land which is part of the same property and is within 100 feet of such buildings;
- School buildings, together with any land which is part of the same property and is within 100 feet of such buildings, and also together with any playgrounds, athletic

fields or other such facilities designed for use by people in the vicinity of school buildings;

- Commercial or other buildings where human use occurs (including without limitation places of business, places of worship, and other commercial and institutional buildings), together with any land which is part of the same property and is within 100 feet of such buildings;
- Developed recreational areas open to public accommodation, including developed public or commercial campgrounds, developed picnic areas, marked roadside rest areas, marked publicly owned or maintained hiking trails, developed park and recreation facilities, playgrounds, playing fields and other areas developed for organized sports or recreation;
- Apiaries, the location of which are registered with the Department of Agriculture, Food and Rural Resources pursuant to 7 M.R.S.A. 2701;
- Critical areas designated by the Board of Pesticides Control pursuant to 22 M.R.S.A. 1471 M(2);
- Public wells, drinking water springs used by the public, and public water supply intake points, provided the location of the same is known or should reasonably be known to the pesticide applicator;
- Private sources of drinking water, where the owner or legal user thereof has given prior notice of the locations of such source to the landowner or lessee of the area which will be subject to a pesticide application;
- Water bodies, including streams, brooks, rivers, ponds, lakes, estuaries and marine waters, provided that any such water body contains water at the time of the pesticide application and is known to the spray applicator or is reasonably detectable from visual observation, reasonably available maps or reasonable inquiry. This term shall not include: (a) in the case of forest aerial spray programs, streams and brooks that are neither shown on reasonably available maps nor visible from an aircraft operating at 1000 feet in elevation above ground level; and (b) waters that are confined and retained completely upon the property of the person conducting or contracting for spray services, and that do not drain into or connect with any other water body;
 - Class 1 and Class II wetlands,
 - Cleared areas where livestock are contained or pastured cultivated land, cropland or gardens.

12. SAFETY

Safety is considered paramount importance at COMPANY and all employees and contractors working for COMPANY are expected to observe all safety rules.

Safety Violations: Violations include lack of or improper use of personal safety equipment, cones and signs.

First Offense (in one calendar year)

- Verbal warning to employee
- Document on Crew Analysis Form

Second Offense (in one calendar year) for same violation

- Written warning to employee
- Document on Crew Analysis Form
- 1 day off from COMPANY system

Third Offense (in one calendar year)

- Written warning to employee
- Document on Crew Analysis Form
- 3 days off from COMPANY system

Fourth Offense (in one calendar year)

- Dismissed from COMPANY system

Reckless Endangerment Offense: Violation includes conduct that has the potential to result in serious injury or death.

First Offense (in one calendar year)

- Written letter to employee
- Document on Crew Analysis Form
- 1 day off from COMPANY system

Second Offense (in one calendar year)

- Written warning to employee
- Document on Crew Analysis Form
- 3 day off from COMPANY system

Third Offense (in one calendar year)

- Dismissal from COMPANY system

Safety violations, which require disciplinary actions not reported by the crew supervisor, will fall under the Safety Violations category and be charged to the crew. If a contractor supervisor withholds safety violation information from COMPANY personnel the incident will be reported to their appropriate company managers.

13. REGULATORY REFERENCES

All state and federal laws, regulations, and guidelines must be adhered to when employed by the company. Key regulations listed:

ANSI

Z.133.1-1988, American National Standard
Pruning Standards - A300; Tree Care Operations

High Voltage Safety Act

"An Act to Create the Overhead High-voltage Line Safety Act"
(Section 1. 35-A MRSA C.7-A). (H.P. 894 – L.D. 1247)

Landowner Notification

"An Act to Expedite Maintenance of Utility Facilities" (Section 1. 35-A MRSA § 2522.)
(H.P. 346 – L.D. 1041)

Maine Pesticides Control Act 7 M.R.S.A. 606 (2) (6)

State of Maine Revised Statutes of 1975 (title 7)

Tree Care Industry Association

Pruning Standards

National Electric Safety Code

Section 218

OSHA Standard

29 CFR 1910:269 - Electric Power Generation, Transmission, and Distribution
29 CFR 1910:269(R) - Line Clearance Tree Trimming
29 CFR 1910:1200 - Hazard Communication Standard

"Pruning Near Electric Utility Lines" Dr. Alex Shigo

Slash Law

"An Act to Amend the Laws Relating to Slash Disposal along Highways and Railroad and Utility Corridors "(Section 1. 12 MRSA §9332 and §9333.)

COMPANY Accident Prevention Manual
COMPANY Field Operating Procedure 400
Tribal Regulations

14. GLOSSARY

Annual growth -A yearly incremental stage of vegetation growing that can be visually determined by the annual nodes.

Arborist -Here after referred to as "Arborist". A COMPANY employee whose role within their respective administrative area is to plan, budget, execute, and audit vegetation management projects; resolve customer issues; work closely with contractor leadership to achieve performance goals & assist with municipality relations/issues. Additionally, to participate in managing storm restoration; implement program policies/programs.

Brush - Vegetation less than four inches DBH that may reach the overhead facilities at maturity.

Buffer zone - Areas adjacent to highways, streams, public property, scenic areas, historic sites or other areas of special concern. May have visual or environmental value or purpose.

Chemical treatment - The application of a chemical herbicide formulation to vegetation for the purpose of removing the vegetation, controlling sprout growth, or preventing regrowth from stumps.

Clearance - The distance between vegetation and the overhead facilities.

Clearance zone - The area in, around, or under overhead facilities where vegetation is removed planned to re removed.

COMPANY - This represents Central Maine Power Company.

Construction type - The configuration and design of the overhead facilities.

CONTRACTOR- Firm that has been awarded a formal contract to perform work described in these specifications.

CST - Cut surface treatment composed of a herbicide mixed in a carrier with a marking dye.

Danger tree - Trees designated outside or at the edge of the established clearing zone and whose retention would jeopardize line reliability.

DBH - The diameter of vegetation measured at a point four and one half feet above ground level.

Disposal method - A specific technique utilized for disposing of cut vegetation.

Dormant - Not actively growing but protected from the environment.

Easement - A defined area within which the Company has the right to maintain facilities.

Ground cutting - The practice of cutting vegetation at ground level under or adjacent to overhead facilities, where the vegetation has the potential to interface with the overhead facilities.

Hangers - Cut stems and branches left in the tree.

Hazard tree - Vegetation which appears to: be dead or dying, be structurally weak, have loss of bark, have loss of foliage, and have stress breaks.

Herbicide application -Use of chemical formulations to remove target vegetation or prevent the resprout of targeted vegetation.

Lateral branch - A branch extending from a parent branch or stem.

Line clearance - The practice of removing vegetation from around overhead facilities.

Main leader - A dominant upright stem, usually the main trunk.

MPUC - Maine Public Utilities Commission.

Multiple leaders - Many stems of vegetation originating from the same root system.

Node - A point on a stem at which a leaf or leaves are attached.

Notification - Consultation with landowners regarding planned vegetation management work.

Natural pruning - Also called "Drop Crotch" or "Lateral pruning". A method of pruning where limbs are cut off just outside the branch bark ridge eliminating long stubs.

Overhead facilities - All electrical conductors and equipment that are attached to a utility pole and are used for the conveyance of electricity.

Permission - The act of receiving approval from the appropriate property owner, where the vegetation is located, in order to perform necessary preventative maintenance on the vegetation.

Plant - Relative to distribution vegetation management purposes, the definition is a tree, vine, or shrub.

Preventative maintenance - The pruning, trimming, removal or chemical treatment of vegetation, growing or existing in proximity to overhead facilities, for the purpose of preventing such growth from interfering with the overhead facilities.

Pruning - The removal, in a scientific manner, of dead, dying, diseased, interfering, objectionable, and/or weak vegetation branches.

ROW - Right-of-Way

Screen - Visual vegetation buffer or barrier adjacent to public areas or waterways.

Selective treatment - The removal, cutting or trimming of vegetation designated for removal and the retention of vegetation designated to be preserved.

Shade or ornamental tree - Tree growing in an area where the landscape is actively managed.

Shrub - A low usually multi-stemmed woody plant.

Side trimming - The removal of side branches from trees growing alongside off road power lines.

Slash - Debris including trees, branches, etc. resulting from tree pruning or removals.

Sucker growth - New growth originating from adventitious buds. Usually induced by removing a branch.

Tree - A woody perennial plant having a single usually elongate main stem.

Tree growth regulator (TGR) - Formulation applied to actively growing trees to reduce growth, by reducing inter nodal growth.

Trim - See "Pruning"

Vegetation - Plant life such as trees, shrubs, vines, and brush that has a potential to interface

Vegetation management cycle - A predetermined period of time between preventatives with

overhead facilities.

Vine - A plant whose stem requires support and which climbs by tendrils or twining.

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