

* UMASS/AMHERST *



312066 0271 2829 7

A very faint, large watermark-like image of a classical building with four prominent columns is visible in the background.

Digitized by the Internet Archive
in 2013

<http://archive.org/details/rightofwayvegeta00mass>

MASSA EA50. $2^{\text{nd}} \sqrt{5.2}/2$

PREFACE

The purpose of this Vegetation Management Plan is to comply with 333 CMR 11.00 for the Western Massachusetts Electric Company, Holyoke Water Power Company, and the Holyoke Power and Electric Company (hereafter referred to as the companies), all subsidiaries of Northeast Utilities. The plan covers vegetation maintenance on 500 miles of line along bulk supply transmission and subtransmission right of ways and 3,500 miles of local distribution lines mostly along roadsides. These facilities are involved in the transmission of power from generation sources to load centers throughout western Massachusetts and the distribution of electricity to approximately 189,000 individual customers in 63 cities and towns.

Because bulk supply and local distribution lines are significantly different in character of construction, adjacent environment and technique used to control target vegetation, this Vegetation Management Plan is divided into two parts -- Part A (Right-of-Way Vegetation Management Plan 1989-1993) outlines vegetation management plans for 500 miles of transmission and bulk distribution supply right-of-ways. Part B (Local Distribution Vegetation Management Plan 1989-1993) outlines vegetation management plans for 3,500 miles of local distribution lines.

GOVERNMENT DOCUMENTS
COLLECTION

PART A
RIGHT OF WAY
VEGETATION MANAGEMENT PLAN (VMP) FOR
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
AND
HOLYOKE POWER AND ELECTRIC COMPANY
FOR YEARS 1989 THROUGH 1993

TABLE OF CONTENTS

- I. INTRODUCTION
 - II. GOALS AND OBJECTIVES
 - III. IDENTIFICATION OF TARGET VEGETATION
 - IV. METHODS OF VEGETATION MANAGEMENT AND RATIONALE FOR USE
 - V. JUSTIFICATION OF HERBICIDES
 - VI. IDENTIFICATION OF SENSITIVE AREAS AND CONTROL STRATEGIES PROPOSED FOR SENSITIVE AREAS
 - VII. OPERATIONAL GUIDELINES FOR APPLICATORS
 - VIII. INTEGRATED PEST MANAGEMENT PROGRAM
 - IX. ALTERNATIVE LAND USE PROVISIONS OR AGREEMENTS MINIMIZING THE NEED FOR HERBICIDES
 - X. REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS
- APPENDIX A O IDENTIFICATION AND QUALIFICATIONS OF INDIVIDUALS DEVELOPING AND SUBMITTING PLAN
- APPENDIX B O LETTER FORMATS (2) TO BE SENT TO LANDOWNERS WHO OBJECT TO NU'S HERBICIDE USE AND AGREE TO KEEP CLEAR NU'S (TRANSMISSION/DISTRIBUTION) RIGHTS-OF-WAY EASEMENTS ON THEIR PROPERTY
- O (2) NORTHEAST UTILITIES (TRANSMISSION/DISTRIBUTION) EASEMENT RIGHT-OF-WAY CONDITIONS TO BE MET IN LIEU OF HERBICIDE TREATMENT
- APPENDIX C O 333CMR 11.00: RIGHTS OF WAY MANAGEMENT

I. INTRODUCTION

This Vegetation Management Plan (VMP) describes Western Massachusetts Electric Company's (WMECO), Holyoke Water Power Company's (HWP), and Holyoke Power and Electric Company's (HPE) (hereinafter collectively referred to as "The Company") integrated vegetation control program for transmission and distribution rights of way over the 5 year period from 1989 through 1993 in compliance with the Commonwealth of Massachusetts 333 CMR 11.00, Right of Way Management regulations. A separate VMP (Part B) has been prepared describing the Company's integrated vegetation control program for local distribution lines over a 5 year period in compliance with 333 CMR 11.00.

Environmental Consultants Inc. is currently conducting a study to evaluate the impacts of proposed vegetation management programs on wetlands. The Massachusetts Department of Food and Agriculture (DFA) will review the proposed management program to determine if it will result in less impact on the wetlands than mechanical control. Their finding will influence restrictions placed on wetland sensitive areas.

II. GOALS AND OBJECTIVES

This section summarizes the goals and objectives of this vegetation management plan.

A. Goals of Vegetation Management Plan

The primary goal of this electric utility right-of-way management plan is the control of vegetation and establishment of standard operating procedures to ensure the maintenance of safe and uninterrupted electric service primarily through its bulk supply lines. Access must also be assured in order to permit routine and emergency line maintenance and operations which are essential to preserve continuity and reliability of service.

This plan is a guiding document which provides structure and sensibility to the Yearly Operational Plans (YOP's). At least one YOP will be prepared each year to describe the detailed vegetation management operation for the calendar year consistent with the terms of the VMP's.

B. Objectives of Vegetation Management Plan

The principal objective of woody vegetation management is to selectively eliminate that woody vegetation which may potentially short circuit overhead conductors on the right-of-way. This management program will accomplish that objective at the lowest possible cost to its customers with due regard for worker safety, protection of public health and with minimal unreasonable adverse effects on the environment, including the protection of sensitive areas. Selective control benefits wildlife habitat for many species of animals by encouraging plant communities that provide food and cover. The program is also designed to maintain acceptable appearance of the right-of-way and to minimize erosion by allowing the development of low shrubs and ground cover. The low shrubs and ground cover inhibit the re-establishment of target tree species, and each selective herbicide application reduces the number of target tree saplings present. Therefore, herbicide use is minimized because less herbicide is required with each successive treatment approximately every 5 years as a direct result of integrated pest management.

The foregoing will be accomplished in full compliance with all applicable state and federal laws and regulations.

C. Sensitive Areas

Special protection is afforded sensitive areas in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects. Buffer zones are established near public and private water supplies, standing or flowing water, wetlands, and agricultural and habituated areas where herbicide use is restricted.

D. Public Involvement

Public involvement is imperative to the development of an all-encompassing, socially acceptable vegetation management plan. Regulatory procedures have been established which guarantee all interested parties ample opportunity for input and review. In addition, alternative land use options are available which preclude the use of herbicides. In total, this vegetation management plan provides a comprehensive and integrated framework which protects the environment and the health, safety and welfare of the Citizens of the Commonwealth.

E. Location of Rights-of-Way

The Company's service area extends from the Berkshire Mountains bordering New York State to the highly urbanized area surrounding Springfield, and reaches in a north-south direction from the Vermont -New Hampshire border to Connecticut.

The Massachusetts portion of Northeast Utilities (NU) is comprised of three subsidiaries located in western Massachusetts. WMECO's transmission and distribution facilities provide electrical service to over 189,000 customers across western Massachusetts. HWP has transmission and distribution facilities which serve industrial customers in Holyoke. HPE has transmission and distribution facilities in the Town of South Hadley and the City of Chicopee.

Electric service is delivered through 359 pole miles of transmission lines, 142 pole miles of bulk supply distribution lines and 3,514 pole miles of local distribution lines. Transmission line rights-of-way are the backbone of the system and operate at voltages ranging from 69,000 to 345,000 volts. They provide the connection between generating plants and area substations and are inter-connected with the transmission facilities of other utilities. Bulk supply distribution rights-of-way operate at either 23,000 or 13,800 volts. They provide the link between substations and local distribution lines which deliver electrical energy to customers.

The Company's transmission rights-of-way are located in the following 48 municipalities:

Agawam	East Longmeadow	Leverett	Shutesbury
Amherst	Erving	Longmeadow	Southampton
Ashfield	Granby	Ludlow	South Hadley
Becket	Granville	Montague	Southwick
Belchertown	Greenfield	Northfield	Springfield
Blandford	Hampden	Otis	Sunderland
Cheshire	Hancock	Pelham	Warwick
Chicopee	Hinsdale	Peru	Wendell
Conway	Holyoke	Pittsfield	Westfield
Dalton	Lanesboro	Plainfield	West Springfield
Deerfield	Lee	Russell	Wilbraham
Easthampton	Lenox	Shelburne	Windsor

The Company's bulk supply distribution rights-of-way are located in the following 35 municipalities:

Agawam	Dalton	Huntington	Pittsfield
Amherst	Deerfield	Lanesboro	Russell
Becket	Easthampton	Lee	Shelburne
Blandford	Gill	Lenox	South Hadley
Chester	Granby	Longmeadow	Springfield
Chesterfield	Granville	Ludlow	Southwick
Chicopee	Greenfield	Montague	Westfield
Conway	Hadley	Montgomery	West Springfield
Cummington	Holyoke	Otis	

III IDENTIFICATION OF TARGET VEGETATION

The primary objective of electric utility vegetation management is the selective control of those woody plants capable of growing tall enough to interfere with the conductors and access. This section identifies this tall-growing, "target vegetation" by plant species as related to its location on transmission or distribution rights-of-way.

A. Plant Species

For the purposes of electric utility vegetation control, plant species are generally divided into two groups, undesirable species capable of growing into the conductors, and desirable species which normally cannot. It is the contractor's responsibility to be knowledgeable about and to instruct his crews in the identification of target vegetation. These groups are defined below:

1. Undesirable Species - Undesirable species include trees and vines. Trees are woody plants normally maturing at 20 feet or more in height, usually with a single trunk, unbranched for several feet above ground and with a definite crown. Undesirable tree species include poplar (Populus spp.), Pitch Pine (Pinus rigida) and Red Maple (Acer rubrum) which are capable of growing into the conductors. Woody vines such as wild grape (Vitis spp.) and Virginia creeper (Parthenocissus quinquefolia) are also controlled when they risk electric reliability by climbing structures, poles and guy wires.
2. Desirable Species - Desirable species include low growing, shrubs, ferns, grasses, and herbs. Shrubs are woody plants normally maturing less than 20 feet in height and presenting a generally bushy appearance because of their several erect spreading or prostrate stems. Most shrubs such as Mountain-laurel (Kalmia latifolia), Highbush Blueberry (Vaccinium corymbosum) and Hazelnut (Corylus americana) cannot grow into the conductors and are normally preserved and encouraged to grow. Non-woody plant species such as ferns, grasses, and herbs benefit from the reduced competition for space and are allowed to flourish.

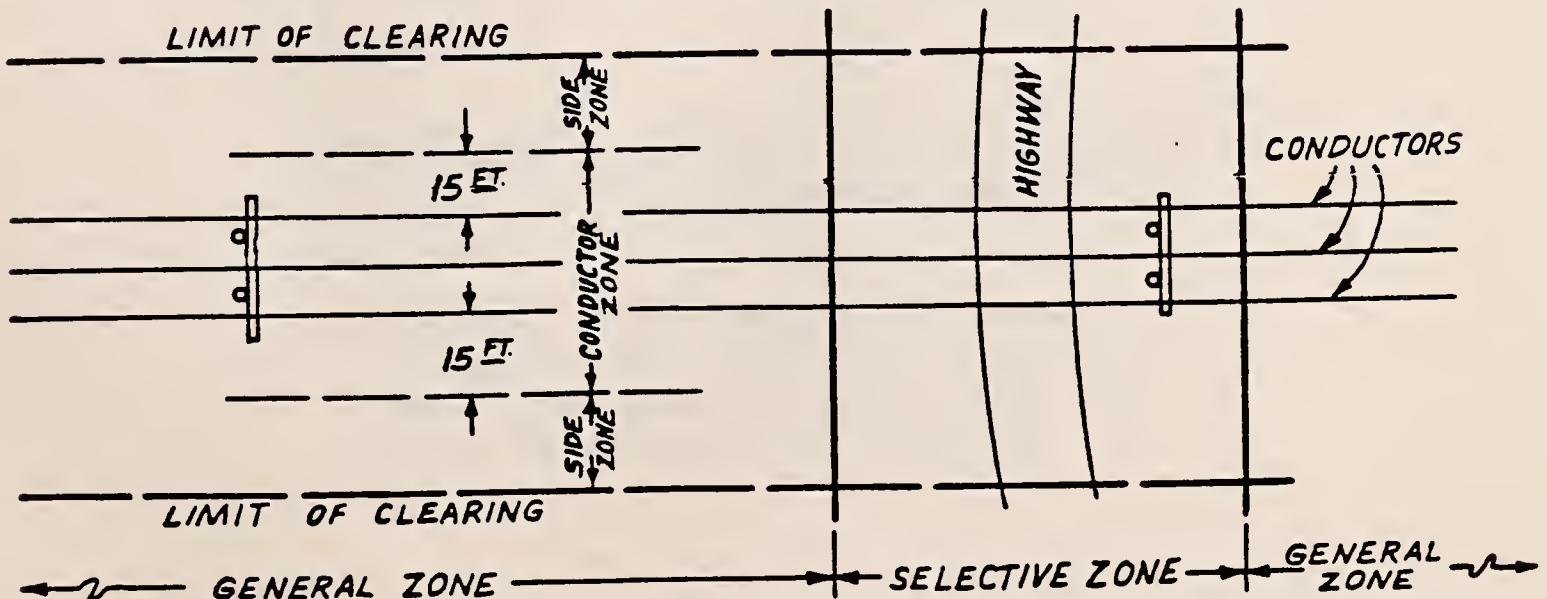
The following articles B and C identify target vegetation relative to location in the right-of-way and the difference between transmission and distribution rights-of-way:

B. Transmission Right of Way

1. A transmission line right-of-way is divided into the following defined zones:

- a. Selective Zones - Areas so designated on the plans, generally within highway limits or immediately adjacent to highways, within or adjacent to public parks or residential areas, where lines span deep ravines, rivers, streams or ponds, and in other locations so classified. This is to provide buffer zones to visually distract from public views of the right of way.
- b. General Zones - Areas that are generally remote from public view or access, including all locations which are not Selective Zones as defined above. General Zones are composed of the two sub-parts following.
 - 1) Conductor Zones - Areas normally centered along the center line of structures and extended outward a distance of 15 feet from the lowest conductor on each side of a structure, as measured at right angles to the vertical projection on the ground of the un-swung outermost conductor(s).
 - 2) Side Zones - Remaining areas on each side of each Conductor Zone extending outward to the limits of clearing, which limits may or may not be the edges of the rights of way.

PLAN VIEW



2. The following portions of the Northeast Utilities "Specification For Woody Vegetation Control On Transmission Rights-of-Way" identify the target woody vegetation.

a. General Instructions for Woody Vegetation Control

1) Selective Control

- a) Wherever they don't interfere with access, naturally occurring low growing shrubs, herbs, and grasses are considered desirable and are encouraged to grow and flourish. These low growing species limit the growing space available and discourage the invasion of tall trees.

Control of all undesirable woody vegetation that is capable of growing tall enough to interfere with the conductors shall be done with care to minimize damage to shrubs that are to remain. The following is a partial list of the most common shrub species normally to be preserved.

Hazelnut	Huckleberry
Gray Dogwood	Spicebush
Juniper SPP	Witchhazel
Pussywillow	Pinxterbloom Azalea
Viburnum SPP	Mountainlaurel
Sweetfern	Redosier Dogwood
Bayberry	Highbush Blueberry
Lowbush Blueberry	

- b) It is the Contractor's responsibility to be knowledgeable about and to instruct his rights-of-way crews in the identification of desirable and undesirable plant species and the various herbicide control techniques necessary for integrated vegetation management.

2) General Zones

- a) Conductor Zones - Normally, any woody vegetation which matures taller than 12 feet is considered detrimental to line reliability and shall be eliminated.
- (1) Herbicide treat when most of the undesirable woody vegetation is no taller than 12 feet, at any time of year permitted by the contract documents.

- (2) Cut and stump treat normally when undesirable woody vegetation is taller than 12 feet.
- b) Side Zones - In the side zones only the wind blow-out positions of the conductors at 60°F conductor temperature affect the maximum heights permitted for woody vegetation.

Normally, any woody vegetation which matures taller than 20 feet shall be eliminated.

- 3) Selective Zones

- a) General

- (1) At locations where density of undesirable woody vegetation is light and dead canes will blend into surroundings
 - o Herbicide treat when most of the undesirable woody vegetation is approximately 3 to 6 feet high
 - o Cut and stump treat normally when undesirable woody vegetation is taller than 6 feet.
 - (2) At locations where undesirable woody vegetation is dense, cut and stump treat all undesirable woody vegetation.

- 4) Right-of-Way Accessibility

- a) General

For the following access locations, normally control all woody vegetation except for low woody shrubs such as Lowbush Blueberry and Lambkill Kalmia which have a height at maturity of less than 2 feet.

- (1) The access route within the right-of-way shall be controlled normally to a 14 foot width. The route shall be aligned to touch one side of each pole or structure, following any existing route within the right of way whenever practicable.
 - (2) At line structures, control outward from the periphery normally to a distance of 10 feet.

- (3) At anchor guys, control outward normally to a distance of 5 feet.

C. Distribution/Transmission Right-of-Way Similarities/Dissimilarities

Bulk Supply Distribution Rights-of-Way differ from Transmission Rights-of-Way in that distribution rights-of-way normally are half as wide or less than half as wide because distribution lines are much smaller physically and require less clearance than transmission lines.

Because distribution rights-of-way are narrow, there is no Conductor Zone centered under the conductors, and there are no side zones within the general zones. Therefore, within the distribution general zones (from side limit of clearing to side limit of clearing), any woody vegetation which matures taller than 12 feet is controlled.

Woody vegetation control for selective zones in either transmission or distribution rights of way is specified the same for both.

Regarding accessibility, woody vegetation control within the specified access route and the width of the access route in the right-of-way, and access at line structures is the same for transmission and distribution.

Target vegetation is the same for both kinds of right-of-way.

IV. METHODS OF VEGETATION MANAGEMENT AND RATIONALE FOR USE

This section describes the intended methods of vegetation management and rationale for use, including vegetation control techniques, equipment proposed for use, timing and other control procedures. An integrated approach to vegetation management has been developed which minimizes the use of herbicides through a balanced mix of cultural practices, natural strategies, and a carefully planned program of chemical control. State of the art techniques, time tested methods, and a low input approach to vegetation control are incorporated into an innovative and interdisciplinary plan. Above all else, a major commitment is made to the protection of human health and safety, and the prevention of unreasonable adverse effects on the environment. Vegetation control is scheduled so approximately one fifth of the rights-of-way are inspected at approximately 5 year intervals and maintained if necessary to ensure the integrity of the electrical system.

A. Selective Herbicide Control

There are currently four selective herbicide techniques used to control vegetation on the Company's rights-of-way. They are conventional basal, low volume basal, stem-foliar and cut stump techniques. Selective herbicide control is used because it allows the user to regulate the density and composition of the resulting plant community, enhances wildlife habitat for many species of animals, is the most economical means of control, serves in erosion control, normally results in less noise pollution and exhaust fumes than mechanical methods, is generally safer to the applicator than mechanical methods, and does not cause unreasonable adverse effects on human health or the environment when used according to label directions. All techniques use only federal and state approved herbicides.

1. Conventional Basal Technique

The conventional basal technique consists of a dilute oil-borne herbicide mixture (1 1/2 - 2% herbicide mixed with 98-98 1/2% kerosene, diesel or No. 2 fuel oil by volume). Application is made by thoroughly wetting the stem on all sides from a level 15 inches above ground down to the root collar at groundline. Care is taken to wet the root collar until run-down is noticeable. A high degree of selectivity is achieved because only the lower portion of each target stem is treated with the wand held within inches of each stem.

Application may be made using hand-operated backpack sprayers or hydraulic spray machines. Hand-operated backpack sprayers such as a "Birchmeier", are 2 1/2 to 5 gallon capacity units equipped with a hand pump for low pressure treatment. Because of their limited capacity and relative light weight, they are useful for terrain inaccessible to larger machinery.

Hydraulic spray machines use either tracked or rubber tire off road vehicles, mounted with a hydraulically operated pump, a 100 to 600 gallon capacity mix tank, and two or three hoses at least 100 feet long. Treatment is made by applicators, walking along the ground, holding treating wands. Pump pressure for hydraulic spray machines does not generally exceed 25 psi for basal applications.

Basal applications can be made during the active growing season or during the dormant season as long as the stems are dry and clear to the root collar. Spray drift is very effectively controlled by utilizing low pressure, coarse sprays, and applications within inches of each stem.

Herbicides applied in this manner achieve control by penetrating the bark and girdling the stem by disrupting conduction within the treatment area. The herbicide does not translocate throughout the plant and therefore relies on "top kill" and starvation of the root system by disrupting the normal flow of water and nutrients throughout the plant.

2. Low Volume Basal Technique

The low volume basal technique was introduced on the Company's rights-of-way in 1988. This method is similar to the conventional basal treatment, but a more concentrated solution is used in order to minimize the amount of oil carrier applied per acre (25% herbicide is mixed with 75% kerosene, diesel or No. 2 fuel oil by volume). Application is made by wetting the stem on all sides starting at groundline. A uniform upward motion is made to the proper height until the first sign of buildup appears at the top of the treated area. This results in a uniform surface wetting without runoff. Stems measuring one inch in diameter or less at groundline are treated to a height of 6 inches. Stems measuring over one inch in diameter at groundline are treated to a height of 15 inches.

Large volume hydraulic spray machines are not needed since this method uses from one-tenth to one-eighth the light oil required for conventional basal treatments. Instead, applications are made using hand-operated backpack sprayers with low volume wands and cone shaped nozzles. Nozzle spray pattern approximates one inch in width four inches out from the nozzle. Proper pressure is very important to maintain this pattern and also to avoid atomizing the mixture. After filling the backpack, normally 5 full pumping strokes of the handle are enough for pressurization. As the spray pattern narrows while treating, the handle is pumped once or twice to maintain the proper pattern. A proper spray pattern, low pressure, and direct applications virtually eliminate the chances for off-target drift.

By varying herbicide proportions in the spray mixture, the low volume technique can be used both during the active growing season and the dormant season but only when the stems are dry and clear to the root collar. Herbicide dosage rates for the low volume technique are expected to be similar to the conventional basal method, but with greatly reduced oil carrier.

3. Stem-Foliar Technique

Stem-foliar applications direct a mixture of herbicide to the stem, branches and leaves of target vegetation. The mixture consists of herbicide and water.

The application equipment is generally hydraulic spray machines with large tanks as described for the basal technique. Applicators normally stand 10 to 15 feet from target vegetation and direct the spray at individual saplings in order to minimize non-target injury. Spraying desirable shrubs is avoided because it is wasteful of time and chemical and increases the chances for invasion of tall growing tree species.

The operating pressure is set below 60 psi for sensitive area limited herbicide treatment zones, and normally between 100 and 150 psi outside limited herbicide treatment zones. The nozzle opening is regulated to produce a coarse spray of large droplet size. Spreaders and sticking agents are added to the mixture to assure uniform coverage and adherence to the plant surface. Applications are not made during measurable precipitation since rain water washes the herbicide from the plant, reducing its effectiveness. In locations which are not sensitive areas, any treating done within 12 hours before the start of precipitation shall be retreated. Stem-foliar applications are shut down under windy conditions when drift cannot be controlled through a coarse spray or spray additives.

Stem-foliar applications are made after leaves are fully developed and while the plant is actively growing, normally between June and early September. The specific herbicide used will further modify this time frame.

Various stem-foliar herbicides affect the plant in different ways. Some stem-foliar herbicides penetrate plant tissues and are readily translocated throughout the plant causing effective "root kill". Other stem-foliar herbicides, such as Krenite, have limited lateral movement and penetrate the outer surfaces to kill underlying growth tissues. Control is achieved by inhibiting bud development and leaf out the following spring, resulting in the eventual starvation of the plant.

4. Cut Stump Technique

Whenever a deciduous tree or tall shrub or a Pitch Pine is taken down, the stump is immediately treated with herbicide that will prevent sprouting. Cutting is accomplished using a chainsaw, brush saw or mower. Stump treatments are made no later than the end of the same day as cutting to ensure movement of the herbicide into the stump. The application is targeted towards the cut surface.

The herbicide is applied with a hand held spray bottle, hand-operated backpack sprayer or it may be painted on the cut surface. These applications, directed only to the cut stump surface, result in practically no drift.

The herbicide penetrates the outer sapwood, to disrupt the cambium and prevent growth of dormant buds.

The additional cost of cutting increases the cost of this technique over the cost of conventional basal, low volume basal and stem-foliar techniques. The effectiveness of this technique may be reduced if stumps are hidden from the applicator by debris and remain untreated.

B. Cutting Without Herbicide Treatment

Cutting without following-up with an herbicide stump treatment is practiced only at a few locations on the system where the use of herbicides is expressly prohibited. The prohibition may appear in the wording of a few easement documents, or it may be a denial by the property owner where no easement document exists. Effective with the VMP, cutting without herbicide treatment will be practiced in Sensitive Areas wherever herbicides are prohibited by 333 CMR 11.04.

1. Primary Types of Cutting

- a. Mowing is practiced as the most cost effective method at locations which provide minimal obstacles to rubber tired or tracked off-road machines fitted with large rotary mowing heads.

Mowers are selective only in that the mowing head may be turned off or lifted when encountering desirable species, or the machine can simply be maneuvered around non-target species. Normal cutting action of the mower disposes the brush into a biodegradable heavy mulch along the right of way.

- b. Cutting with hand held tools is practiced at locations which are inaccessible to mowing vehicles and in most Selective Zones as defined in Article III Bla. It involves the cutting-off of target stems using gasoline powered chainsaws and brush saws. Cuts are made as close to the ground as possible, usually leaving no stumps greater than 3 inches in height. Hand-cutting operations may be conducted any time of the year except when deep snow prevents the cutting of low stumps.

V. JUSTIFICATION OF HERBICIDES

The Company's vegetation management plan accomplishes the overall goal of continuous and reliable electrical service at a reasonable cost to its customers while placing primary importance on health, safety and environmental protection. This section compares the relative benefits of herbicide control with other methods and describes why herbicides are an essential part of an effective vegetation management program.

A. Regulation of Stem Density and Plant Composition

Selective herbicide application provides significant advantages in decreasing the density of target vegetation and encouraging the development of compatible plant communities. A long term reduction in numbers of tree stems can be achieved by halting the regrowth of tree sprouts and allowing shrub species to dominate. Each subsequent selective herbicide treatment further reduces the number of target stems; therefore, less and less herbicide is required for each future treatment.

B. Wildlife Habitat

Conclusive studies have proven that selective herbicide applications significantly enhance wildlife habitat through the development of a complex, relatively stable plant community. Selective use of herbicide develops an environment and edge habitat beneficial to a wide variety of wildlife species. Deer, songbirds, and a multitude of other animals are known to use these rights-of-way for food, cover and natural corridors of travel.

C. Economics

Economics refers to the costs of the various management techniques and the effectiveness of a particular method in controlling target species. Since effective control of target species is paramount to a successful vegetation management program, optimum control is that which is most cost effective over the long term.

A vegetation management plan based solely on cutting would be cost prohibitive. Hand cutting or mowing without the benefit of herbicides allows the root systems of cut-off sproutable stumps to remain alive. Dormant or adventitious buds located on the root or stumps quickly develop into sprouts, often during the same year of cutting. Instead of a single stem which existed prior to cutting, a cluster of sprouts soon becomes established. Since a developed root system is already present, the growth rates of the newly formed sprouts is much faster than the normal growth rate of the tree. In fact, dense sprouts approximately 7 feet tall have occurred during the first full growing season immediately following cutting.

A hand cutting or mowing program would require repeated reclearing of brush due to resprouts with a one-time cost of approximately 1 to 5 times that for one herbicide application. This cost multiple is compounded further in that cutting must be performed 2 to 3 times more often than selective herbicide treatments. While warranted under certain conditions (e.g. in restricted sensitive areas, when weather is not appropriate, and when woody vegetation is too tall to herbicide treat effectively), the high per acre cost of cutting, lack of sprout control, and the necessity for more frequent maintenance reduce the long term cost effectiveness of cutting without herbicide treatment.

D. Erosion Control

A well-established, low-growing plant cover as provided by selective herbicide use also serves to control erosion by holding soil against wind and water movement. Conversely, under certain site conditions, continued cutting without the benefit of herbicides can leave the ground bare and vulnerable to soil losses.

E. Noise and Air Pollution

Reliance on cutting methods would result in increased noise and air pollution as compared to herbicide control. Since crews have to return more frequently for cutting, noise pollution and exhaust from vehicles and brush cutting equipment are a normal consequence. Also, fuel consumption for equipment increases.

F. Intensive Herbicide Regulations

Herbicides applied to the Company's rights-of-way are strictly regulated by federal and State agencies. The U.S. Environmental Protection Agency (EPA) requires extensive developmental testing to demonstrate the product can be used to control plants and will not cause unreasonable adverse effects to health and environment. Biological effectiveness studies ensure that the chemical performs in accordance with claims, toxicity tests assess biological effects, and metabolism/degradation research determine the fate of herbicides in soil, water, plants, and animals.

Toxicity is a measure of how poisonous a pesticide is. Toxicity studies have demonstrated that herbicides are generally the least harmful class of pesticides to mammals, birds, and fish. The herbicides the Company uses for right-of-way vegetation control are rated from slightly toxic to relatively non-toxic, do not bioaccumulate in living tissue, and if ingested, are readily eliminated from animals via natural processes.

Only after the EPA is convinced that the herbicide will not cause adverse effects to humans, animals, or the environment, can the product be registered by the EPA and then approved for use in Massachusetts by the State Department of Food and Agriculture (DFA). The approved herbicides are applied by contractors that are licensed or certified by the State to insure that herbicide label directions and precautions are strictly adhered to. The Company's policy requires compliance with all applicable federal and state laws and regulations.

G. Integrated Vegetation Control

While there are several methods of controlling target vegetation, under certain site conditions the use of herbicides is not appropriate and cutting operations are conducted without them. Also, handcutting and mowing have a certain range of site conditions under which they are applicable. Conditions which determine the control technique include sensitive areas, weather, visual aesthetics, time of year, height of vegetation, access, etc. Since these factors vary from one right-of-way to the next, the proper control technique must be suited to the actual site conditions. These factors are recognized in selecting the appropriate control technique applicable to the right-of-way.

H. Environmental Impacts

Herbicides used on the Company's rights-of-way do not cause unreasonable adverse effects to the environment when used in accordance with label directions. Herbicides are applied only occasionally (usually every 5 or more years) and in a diluted form. Herbicides applied to the Company's rights-of-way are not persistent in soil, but rapidly disappear due to microbial degradation, photodecomposition, adsorption to soil colloids, and chemical decomposition. Because these herbicides do not persist long enough for significant leaching to occur, it is improbable that movement through the soil into ground water will result.

VI. IDENTIFICATION OF SENSITIVE AREAS AND CONTROL STRATEGIES PROPOSED FOR SENSITIVE AREAS

This section defines sensitive areas encountered along rights-of-way, provides references and sources for identifying sensitive areas, outlines the method used to identify sensitive areas, and lists the control strategies proposed for sensitive areas.

A. Definition of Sensitive Areas

Sensitive areas are defined in 333 CMR 11.02 as "any areas, within rights-of-way, including but not limited to the following, in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects:

- (a) within the primary recharge area of a public drinking water supply well
- (b) within four hundred (400) feet of any surface water used as a public water supply
- (c) within one hundred (100) feet of any appropriately marked private drinking water supply well
- (d) within one hundred (100) feet of any standing or flowing water
- (e) within one hundred (100) feet of any wetland
- (f) within one hundred (100) feet of any agricultural or habituated area."

The following table shows the no herbicide treatment zone and the surrounding limited herbicide treatment zone within each sensitive area type.

SENSITIVE AREA - NO HERBICIDE AND LIMITED HERBICIDE TREATMENT ZONES

<u>No Herbicide Treatment Zone</u>	<u>Surrounding Limited Herbicide Treatment Zone</u>
<u>PUBLIC GROUND WATER SUPPLY WELL</u> Within 400 feet of it	Between 400 feet from it and the outer boundary of its primary recharge area.
<u>SURFACE WATER USED AS A PUBLIC WATER SUPPLY</u> Within 100 feet of it	Between 100 feet and 400 feet from it.
<u>PRIVATE DRINKING WATER SUPPLY</u> Within 50 feet of it	Between 50 feet and 100 feet from it.
<u>STANDING OR FLOWING SURFACE WATER</u> Within 10 feet of it	Between 10 feet and 100 feet from it.
<u>*WETLAND</u> Within 10 feet of it	Between 10 feet and 100 feet from it.
<u>AGRICULTURAL OR HABITATED AREA</u> No high pressure foliar applications within 100 feet of it during the growing season	Only low pressure foliar or stem applications within 100 feet of it during the growing season.

Note: *If the DFA finds from the wetlands study (performed in accordance with 333 CMR 11.04 (4) (c)), that the proposed vegetation management program will result in less impact to the wetland than mechanical controls the wetland no herbicide treatment zone and the surrounding limited herbicide treatment zone will be modified accordingly.

B. Reference and Sources for Identifying Sensitive Areas

The following references and sources identify the location of public ground water supplies, public surface water supplies, private drinking water supplies marked in accordance with 333 CMR 11.04 (2) (c) (3), and the general location of wetlands. Standing and flowing water, and agricultural and habitated areas are readily identified in the field.

1. Massachusetts Department of Environmental Quality Engineering (DEQE) Watershed Maps (scale 1:25,000); delineates the perimeter of public watersheds and the location of public wells
2. Massachusetts DEQE Wetland Restriction Maps (scales usually 1:1,000); approximately 15% of the State has been mapped; available from DEQE, Division of Wetlands and Waterways
3. Municipal Maps and Records (scales vary); provides location of private drinking water supplies marked in accordance with 333 CMR 11.04 (2) (c) (3)
4. Regional Planning Agencies' 208 Water Quality Survey Wetland Maps (scales vary); not all planning agencies have copies.
5. U.S. Army Corps of Engineers (COE) Wetland Maps (scales vary); prepared for specific COE projects
6. U.S. Fish and Wildlife Service National Wetlands Inventory Maps (scales 1:24,000 and 1:25,000); available from University of Massachusetts at Amherst, Cartographic Information Research Services
7. U.S. Geological Survey Topographic Maps (scale 1:24,000); identifies major wetland areas
8. U.S. Soil Conservation Service Maps (scales vary); available for most communities; note muck and peat soils
9. William McConnell Land Use Maps (scale 1:25,000); delineates wetlands using aerial photos; available from the University of Massachusetts at Amherst, Dept. of Forestry and Wildlife Management (caution: some forested swamps not included in wetland classification)

C. Method for Identifying Sensitive Areas

The following procedure will be used to identify right-of-way sensitive areas:

1. The appropriate references and sources will be consulted to determine the location of public and private water supplies. Private drinking water supplies must be marked by the property owner in accordance with 333 CMR 11.04 (2) (c) (3).

2. These public and private water supplies will be designated on YOP maps.
3. Prior to application, the location of these public and private water supplies will be identified in the field by a "point person" in advance of the treating crew.
4. Appropriate distances will be measured from these public and private water supplies to identify no herbicide treatment zones and limited herbicide treatment zones.
5. Standing and flowing surface waters, wetlands, and agricultural and habituated areas will be identified in the field.

D. Control Strategies Proposed for Sensitive Areas

The Company's policy requires compliance with all applicable federal and state laws and regulations. The following vegetation control strategies proposed for sensitive areas are consistent with the same.

1. Herbicides will be used in accordance with this Vegetation Management Plan and the Yearly Operational Plan. These documents will be carried at all times with the applicator.
2. Herbicide treatment is made only by applicators who are appropriately certified by the DFA or appropriately licensed by the DFA and working under the on site supervision of an appropriately certified applicator.
3. No foliar applications of herbicides will be used to control vegetation greater than 12 feet in height except for side trimming.
4. No touch-up applications are carried out except under the following conditions:
 - a. Touch-up applications occur within twelve months of the date of approval of the YOP.
 - b. The DFA, Conservation Commission, Board of Health, and chief elected official of the municipality are notified by registered mail at least twenty one days prior to any application.
 - c. No more than 10% of the initially identified target vegetation on the Company's right-of-way in any municipality is treated and the total amount of herbicide applied in any one year does not exceed the limits specified by the label or YOP.

5. A minimum of 24 months will elapse between herbicide applications in limited herbicide treatment zones of public ground water supplies, public surface water supplies, and private drinking water supplies.
6. A minimum of 12 months will elapse between herbicide applications in limited herbicide zones of surface waters, wetlands, and habituated and agricultural areas.
7. No more than the minimum labelled rate of herbicide appropriate to the site, pest and application method will be applied in sensitive areas.
8. Herbicides recommended for sensitive areas and guidelines for their use will be followed as provided by 333 CMR 11.04 (1) (d).
9. All other limitations placed on sensitive areas will be followed as provided by 333 CMR 11.04.

VII. Operational Guidelines For Applicators

The Company's policy requires contracted applicators to comply with all applicable federal and state laws and regulations. That includes 333 CMR 11.00 Right-of-Way Management.

The product label is the permit under which the product can be marketed. The label is periodically updated and provides the most current information which is essential to the safe handling and application of the product. "Use inconsistent with the labeling" is punishable by fine and/or imprisonment.

This section provides a partial summary of operational guidelines as specified by federal and state training manuals, laws, and regulations applicable to right-of-way applicators. The best guideline in applying herbicides is for applicators to use their own awareness, good judgement and common sense.

A. Safety Precautions

The following general safety precautions should be taken when handling and using herbicides:

1. Transporting Herbicides

- a. Do not carry herbicides in the driving compartment of your vehicle

- b. Containers should be placed and secured so they do not tip over or bounce around, preferably in an enclosed compartment.
- c. Do not transport food, feed, or people near herbicides.
- d. Department of Transportation regulations and appropriate state and local laws and regulations must be followed when transporting herbicides across state lines.

2. Protective Clothing

- a. Some herbicides require no protective clothing but common sense should be followed.
- b. Follow label precautions.
- c. Wear protective spray clothes including a closely woven long-sleeved shirt, pants, or coveralls, shoes, and socks.

3. Exposure

- a. Do not work in spray, drift, or run off unless thoroughly protected.
- b. Wash thoroughly before eating, drinking, or smoking.
- c. Work in pairs to help identify poison symptoms.
- d. Keep unauthorized people and animals out of the treatment area.
- e. Use proper application rates.

4. Personal Hygiene

- a. Immediately wash off any herbicide spilled on the body.
- b. Change spray clothes daily.
- c. Keep spray clothes separate from other clothing.
- d. Wash spray clothes thoroughly.
- e. Take a shower at the end of each day.

5. Herbicide Poisoning

- a. Keep herbicides out of the reach of children.
- b. Inform your doctor which herbicide you use.
- c. A well-equipped first aid kit should be available at the work site in case of emergency.

- d. If poisoned, call an ambulance or Massachusetts Poison Information Center and administer proper first aid.

B. Filling and Mixing

Applicators are most often exposed to harmful levels of pesticides during filling and mixing operations since concentrated forms are handled. The following steps should be taken to avoid accidental exposure to the applicator or harm to the environment.

1. Follow all label directions.
2. Keep animals and unauthorized people out of the filling/mixing area.
3. Herbicide concentrates may not be handled, mixed, or loaded on a right-of-way within 100 feet of a sensitive area.
4. Wear protective clothes, rubber gloves, hat, respirator, and goggles or face shield as specified on the label.
5. Change clothes immediately if concentrates are splashed or spilled on clothing.
6. Keep plenty of soap and water at your disposal for cleanup.
7. When pouring herbicides, keep your head well above the opening and position yourself so winds do not carry the pesticide into your face or body.
8. Carefully measure herbicides.
9. Use anti-siphoning devices such as check valves to prevent back flow of water into the filling source.
10. Do not allow the sprayer to run over when filling.
11. Triple rinse empty containers and utilize the rinsings whenever possible.
12. When mixing together two or more products, make sure they are compatible.

C. Equipment Calibration

Unlike certain broadcast methods of application, techniques used to apply herbicides on the Company's rights-of-way do not require specific equipment calibration. The rate of delivery for each application technique is based primarily on the proper coverage of those plant parts specific to the treatment (i.e. uniform surface wetting without run-off for the low volume basal technique). Proper rates of application do, however, depend upon the following parameters:

1. Proper herbicide mixture.
2. Proper distance between the sprayer and target plant.
3. Proper pump pressure.
4. Correct nozzle type and opening size.

Equipment should be kept in good working order. Leaking or faulty pumps, tanks, hoses, nozzles and fittings should be repaired at once.

D. Weather

Applicators must give weather factors due consideration in their decision to conduct spray operations on any given day or to continue when weather conditions become unsuitable. Rain water not only washes herbicides from target vegetation and reduces its effectiveness, but the resulting runoff could pose harm to the environment. High wind speeds increase the chances for drift to non-target plants, sensitive areas and the applicator. For these reasons, "No herbicide is applied when the wind velocity is such that there is a high propensity to drift off target and/or during measurable precipitation".

E. Disposal

Surplus herbicides and empty herbicide containers should be disposed of as described in Pesticide Fact Sheets furnished in the YOP. Disposal must also comply with federal and state laws and regulations. Applicators that accumulate 2.2 lbs./month of acutely toxic materials or 44 lbs./month of toxic materials or 22 lbs./month of unrinsable containers must register as a generator. Acutely toxic materials and toxic materials are listed in the Massachusetts Core Manual Supplement. Generators of hazardous wastes must hire a licensed transporter to take the wastes to approved storage and disposal sites.

To cut down on herbicide surplus, the following measures should be taken:

1. Make sure the herbicide is fully registered and effective against the pest before buying it.
2. Purchase no more herbicide than needed.
3. Avoid mixing herbicides until inspecting the job site.
4. Plan the spray operation so excess mix is not left over at the end of the job.

F. Record Keeping

The Occupational Safety and Health Act (OSHA) of 1970 requires employers of eleven or more employees to maintain records and prepare periodic reports concerning work related deaths, injuries, and illnesses. In the Commonwealth of Massachusetts, record keeping is required of all certified commercial applicators and licensed applicators. Operational records must contain the following information (as specified in 333 CMR 10.16):

1. Place of application
2. Date of application
3. The brand or registered name of the pesticide
4. The EPA registration number of the pesticide
5. The amount of pesticide applied
6. The purpose for which the pesticide was applied
7. Method of application
8. The persons certified or licensed by the Department of Food and Agriculture who participated in the planning and execution of the application
9. Accidents or incidents resulting from use of a pesticide which caused pollution
10. The amount of liability insurance carried and the name of the insurer
11. Any illnesses or injuries caused by or suspected to have been caused by pesticides and reported to the applicator.

G. Specifications

For additional operational guidelines, the following are found in Northeast Utilities "Specification for Woody Vegetation Control on Transmission Rights-of-Way":

1. Woody Vegetation Control Rights

At certain locations, the Owner may have the rights-of-way in fee simple. At other locations, the Owner may possess only easement rights regarding the transmission lines along the rights-of-way with the land being owned by others. The Owner's Representative shall keep the Contractor informed regarding those locations at which the Owner does not have permission to herbicide treat woody vegetation or to do tree work.

2. Vegetation Control Sequence

The Owner reserves the right to designate the sequence in which the properties are to be worked upon. Work may not be continuous; that is, it may be necessary to skip properties and/or stop work entirely.

3. Cherry Tree Disposal Precaution

Wilted cherry leaves are poisonous to livestock; therefore, in areas frequented by livestock, any cherry cuttings shall be disposed of immediately to prevent livestock from eating them. No cherry tree shall be herbicide treated and left standing in these areas.

4. General For All Herbicides

a. Label Instructions - follow all label instructions and the following:

1) Designation of Approved Herbicide Mixture

Designation of herbicide (including manufacturer and brand name), carrier and mixture to be used will be provided by the Owner's Representative before the work is started.

2) Restriction of Herbicide Treatment Application Due to Precipitation

In the event of precipitation, herbicide treating shall cease, and shall not resume until stems are dry. In locations which are not sensitive areas, any treating done within one (1) hour before the start of precipitation shall be re-treated.

3) Specifically as Applicable to Basal Applications

Treating shall be performed only when the stems are dry and clear down to the root collar.

4) Specifically as Applicable to Stem Foliar Applications:

Restriction of Application Due to Precipitation - In locations which are not sensitive areas any treating done within twelve (12) hours before the start of precipitation shall be retreated.

5) Specifically as applicable to stump treatment applications:

Work Period - Apply by the end of the same day the stump is cut.

VIII Integrated Pest Management Program

This VMP continues the Company's long term commitment to use woody vegetation management techniques which optimize control, but minimize the use of herbicides without reducing service reliability. Regardless of technique, all herbicides are applied selectively to control only that woody vegetation which is capable of growing to contact the overhead conductors and/or interfere with access. This allows lower maturing woody shrubs, herbs and grasses to survive and proliferate, competing ever more strongly with target tree saplings which are trying to grow from seeds or sprouts. The net result, proven by the Company's records, is that, with each successive herbicide treatment, there are fewer targets to be treated, and much less herbicide is required. This is due to the selective effectiveness of the herbicides and the effectiveness of the lower growing vegetation in retarding invasion by target tree species. This results in highly selective control of target species through integrated pest management, tree saplings being the primary pests.

The selection of which herbicide mixture and which technique of application (or which alternative control method) to use varies depending upon whether a sensitive area is involved, the target species requiring control, including their height and density, the time of year including ground conditions, weather, and land use on and adjacent to the right-of-way. This is further evidence that integrated pest management is being and will be practiced.

Although this VMP relates to a normal five year interval between herbicide treatments, fixed schedules are avoided by conducting right-of-way condition assessments which determine whether to schedule treatment sooner, at 5 years, or later.

Data will be generated over the next 5 years from contractor daily reports demonstrating how this proposed control program reduces the amount and frequency of herbicide applications. The efficacy of the control methods will be monitored and good results will be maintained detailing the results of different control strategies.

IX. ALTERNATIVE LAND USE PROVISIONS OR AGREEMENTS MINIMIZING THE NEED FOR HERBICIDES

This section describes the alternative land use options which minimize the need for herbicides on the Company's rights-of-way. Private landowners as well as local governments may enter into agreements with the Company to preclude the use of herbicides. A letter format and conditions statement are used for landowners who object to herbicide use and agree to keep clear the Company's easements on their property.

A. Options Precluding Herbicide Use

The following options are available to property owners or local governing bodies which preclude the use of herbicides:

1. Property owners directly encumbered by right-of-way easements are allowed to perpetually maintain their right-of-way property, without the use of herbicides, if the right-of-way is maintained in a condition acceptable to the Company. Refer to Appendix B for formats of letters of agreement and easement right-of-way conditions to be met in lieu of herbicide treatment applicable to distribution or transmission.

2. Municipal governing bodies representing persons within the municipalities who may or may not be directly encumbered by the Company's right-of-way easements, may elect to absorb the additional cost of cutting over the cost of herbicide treating for a given right-of-way within the municipality.
 - a. After a written "Agreement" is signed by officials of the municipality and the Company, the Company contracts to have the interfering woody vegetation cut periodically.

 - b. The governing body pays the on-going cost differential of cutting over the Company's cost of herbicide treating. The governing body pays the entire cost of cutting whenever the remainder of the right-of-way does not require herbicide treatment.

X. REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS

This remedial plan is offered as a guide to proper procedures for addressing pesticide accidents. Since every accident is different, applicators must weigh factors specific to the situation and use their own judgment to decide the appropriate course of action. Because applicators normally carry only small amounts of herbicides, the potential for serious accidents is relatively small.

Federal and state statutes establish emergency response procedures that must be followed by the companies and their contractors in the event of a spill or related accident. Under the Federal Environmental Pesticide Control Act, it is the applicators legal responsibility to clean up pesticide spills resulting from their use and handling of the product. Applicators are liable for damages, subject to penalties, and obligated to clean up and decontaminate areas resulting from pesticide spills.

The Comprehensive Environmental Response, Compensation, and Liability Act 1980 (CERCLA) 42 U.S.C. §9601 et. seq., and the Federal Water Pollution Control Act (CWA) 33 U.S.C. § 1251 et. seq. are aimed at eliminating the accidental discharge of oil and hazardous substances into the environment, providing for the cleanup of such substances, and establishing responsibility for costs of cleanup. CERCLA and CWA are implemented by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 40 CFR §300 et. seq.

Massachusetts General Laws Chapter 21E, the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, in Section 3 authorizes the Massachusetts Department of Environmental Quality Engineering to act to secure the benefits of the CWA and CERCLA to the Commonwealth by promulgating and enforcing a Massachusetts Contingency Plan to "comport with and complement" the National Contingency Plan. The Massachusetts Contingency Plan, 310 CMR 40.000, establishes standards and procedures for the discovery of discharges, notification of DEQE, assessment of the problem, and implementation of appropriate remedial response actions, as set forth in 310 CMR 40.500.

The Farm Chemicals Handbook (published by Meister Publishing Co., Willoughby, Ohio), US Department of Transportation "1987 Emergency Response Guidebook" (available from UNZ and Company, Jersey City, New Jersey), herbicide labels, and material safety data sheets provide reference information for the chemicals being used.

A. Emergency Contacts

The following phone numbers may be dialed for emergency assistance:

ChemTrec	(800)424-9300	Chemical Industry Emergency Response System
Mass. Pesticide Bureau	(617)727-7712	For Pesticide Spills, Fire, and Related Accidents
Mass. DEQE	(413)784-1100	For Emergencies Involving Reportable Quantities of Hazardous Materials
DOW	(517)636-4400	For Emergencies Involving DOW Products; Call Collect
DuPont	(800)441-3637	For Medical Emergencies Involving DuPont Products
Sandoz Crop Protection	(312)699-1616	For Emergencies Involving Sandoz Products
Mass. Poison Information Center	(800)682-9211	For Medical Emergencies Involving Pesticides

B. Emergency Action

If spills are noticed immediately, most of the herbicide can be removed by shoveling off about one inch of treated soil. If spills are noticed after rain, the top 4 to 6 inches of soil should be removed. Activated charcoal can be applied at the rate of seven pounds per 1,000 square feet of ground surface area and incorporated into the soil to absorb any residual herbicide and make it unavailable for plants.

1. Major Spills and Related Accidents For the purposes of this VMP, major spills involve reportable quantities of hazardous materials as defined by the Department of Environmental Quality Engineering (DEQE) 310 CMR 40.000. Related accidents include fire, poisoning, and automobile accidents.
 - a. Administer proper first aid and call an ambulance and/or Massachusetts Poison Information Center in cases involving injury or poisoning.
 - b. Call the police and/or fire department in cases involving automobile accidents or fire.
 - c. Avoid breathing fumes of burning herbicides.
 - d. Put out all sources of fire. Do not light flares, cigarettes, etc. which can ignite certain herbicides.
 - e. If possible, control the spill by stopping the leak or source of spill.
 - f. Confine the spread of liquids with a dike composed of soil or other absorptive materials.
 - g. Call ChemTrec, Massachusetts Pesticide Bureau, or chemical manufacturer for assistance if unable to handle the spill or the material is unfamiliar.
 - h. Notify the DEQE if water bodies are contaminated, and for releases or threatened releases of reportable quantities of hazardous materials or oil. Notify the appropriate municipal official as specified in the YOP.
 - i. Clean up spill.
 - 1) If the spill occurs in a public location, isolate the spill area and deny unauthorized entry until cleanup is complete.
 - 2) Absorb spilled liquids with sand, absorptive clay, spill control gel, vermiculite, pet litter, sawdust or other absorptive material. Wear proper protective clothing and equipment.

- 3) Sweep or shovel contaminated absorbant into a leakproof, sealable container for later disposal.
 - 4) Dry herbicides, such as dusts, granulars and pellets can be directly swept or shoveled into leakproof sealable containers without absorptive materials.
 - 5) Neutralize contaminated area with hydrated lime, sodium hypochlorite (bleach), or soapy water. Never mix bleach and ammonia base products or a poisonous gas will result.
 - 6) Dispose of contaminated material at an approved location.
2. Minor Spills Minor spills involve less than reportable quantities of hazardous materials.
- a. In case of contact with herbicides, wash with plenty of soap and water. Administer proper first aid and see a doctor if necessary.
 - b. Change clothing which has absorbed herbicides.
 - c. Clean up spill.
 - 1) If the spill occurs in a public location, isolate the spill area and deny unauthorized entry until cleanup is complete.
 - 2) Absorb spilled liquids with sand, absorptive clay, spill control gel, vermiculite, pet litter, sawdust, or other absorptive material. Wear proper protective clothing and equipment.
 - 3) Sweep or shovel contaminated absorbent into a leakproof, sealable container for later disposal.
 - 4) Dry herbicides, such as dusts, granulars, and pellets can be directly swept or shoveled into leakproof sealable containers without absorptive materials.
 - 5) Neutralize contaminated area with hydrated lime, sodium hypochlorite (bleach), or soapy water. Never mix bleach and ammonia base products or a poisonous gas will result.
 - 6) Dispose of contaminated material at an approved location.

APPENDIX A

IDENTIFICATION AND QUALIFICATIONS OF INDIVIDUALS

DEVELOPING AND SUBMITTING PLAN

The following individuals are responsible for developing and submitting this VMP. Address responses to:

Robert L. Smuts Telephone No. (203) 634-5162
Northeast Utilities Service Co.
P.O. Box 270
Hartford, CT 06141

Mr. Smuts is presently section head of System Forestry in Northeast Utilities Service Company with over 35 years experience in electric utility forestry including herbicide use. He received a B.S. degree in General Forestry from the SUNY College of Forestry. Prior to joining Northeast Utilities Service Company in 1971, he was Forester for the Hartford Electric Light Company for many years. He has been involved with several utility industry studies regarding herbicides and tree growth regulators, most recently as a member of the Herbicide Working Group of the Edison Electric Institute Transmission and Distribution Committee. The Herbicide Working Group was the Steering Committee working with Dr. Kenneth Carvell in preparation of the report entitled "Herbicide Use On Electric Utility Rights-of-Way." He is a member of the International Society of Arboriculture, its New England Chapter and its Utility Arborist Association, and the T&D Line Clearing Practices Task Group of the Electric Council of New England.

Douglas Pistawka, Environmental Consultants, Inc.

Mr. Pistawka is a consultant to Western Massachusetts Electric Company responsible for developing this plan. In his present position with ECI, Mr. Pistawka is a Contract Coordinator with the Vegetation Maintenance Group at WMECO. Previously he was instrumental in conducting a survey and preparing a report and slide show concerning WMECO off road local distribution lines.

He holds an A.S. in Environmental Science from Genesee Community College and received a B.S. in Resources Management and M.S. in Resources Management and Policy from the SUNY College of Environmental Science and Forestry. He worked on a variety of environmental and legislative issues as an intern with the New York State Assembly in Albany. He was a Line Clearance Specialist with Asplundh Tree Expert Company in New York and previously led a Youth Conservation Corp program on the Moosehorn National Wildlife Refuge in Maine. He worked for the U.S. Forest Service on the Allegheny National Forest in Pennsylvania and the Kaibab National Forest in Arizona and was also an Environmental Instructor for a Cooperative Extension 4-H Camp in New York State. He is affiliated with the International Society of Arboriculture, Massachusetts Tree Warden's and Foresters' Association, Massachusetts Audubon Society, Society of American Foresters, The Wildlife Society, and Society of Photogrammetry and Remote Sensing.

APPENDIX B

NORTHEAST UTILITIES
TRANSMISSION
EASEMENT RIGHT-OF-WAY CONDITIONS
TO BE MET IN LIEU OF HERBICIDE TREATMENT

- A. The right-of-way shall be clear at all times of live woody vegetation as follows:
1. Outside of accessways no woody vegetation (including trees, and tall maturing shrubs) shall be present taller than 8 feet, and no woody vines shall be growing on structures or guy wires.

The only exception to this may be shrubs which mature no taller than 12 feet.
 2. To permit access, no woody vegetation except low woody shrubs which mature at a height of 2 feet or less (such as Lowbush Blueberry) shall be present taller than 2 feet at the following locations:
 - a. In a 14 feet wide access way between line structures. The location of the access way shall be designated by a representative of the Company's Transmission Line Construction and Maintenance Section.
 - b. Outward for a distance of 10 feet around the periphery of each line structure.
 - c. Outward for a distance of 5 feet around each anchor guy.
- B. All stumps shall be cut as close to the ground as possible, and in no case shall they be cut higher than 3 inches unless used as supports for a fence. If certain trees serve as fence supports, they shall be cut no higher than two (2") inches above the fence. All stumps shall be cut-off at right angles to the stems to avoid leaving sharp points.
- C. If cut-off brush is piled by the landowner within the limits of the cleared portion of the right-of-way, it shall be piled as near to the cleared edges as possible and outside of the outermost electric lines. Each brush pile shall be no higher than 4 feet and no larger on its greatest horizontal dimension than 16 feet, and it shall be separated from any other brush or log pile by at least 6 feet. No brush shall be piled within woods roads, paths, in the access locations described in article A2 above, or at any other locations designated by a representative of the Company's Transmission Line Construction and Maintenance Section.
- D. The land owner shall identify with visible markings the boundaries of his property within the right-of-way.

APPENDIX B

LETTER FORMAT TO BE SENT TO LANDOWNERS WHO OBJECT TO NU'S HERBICIDE USE AND AGREE TO KEEP CLEAR NU'S TRANSMISSION RIGHTS-OF-WAY EASEMENTS ON THEIR PROPERTY

Dear _____,

This is to confirm our conversation on _____ (date) concerning woody vegetation control of trees, underbrush, or vines on your property within the (CL&P or WMECO, R/W Identity—kv, from/to) right-of-way, in the town of _____, (state) _____.

Our easement on your land allows us to control woody vegetation, including the use of herbicides. However, you have agreed to cut and keep cut the target woody vegetation within the right-of-way.

Target woody vegetation includes all trees and tall maturing shrubs which are capable of growing to touch and short circuit the wires. It includes also, woody vegetation that is capable of interfering with access routes between and at line structures, as described in the enclosed "conditions" page. By doing this, your preferences as well as our requirements would be met.

If the right-of-way is in a condition satisfactory to (CL&P or WMECO) by _____ (date) and kept that way thereafter, it will not be necessary for us to pursue any of our normal woody vegetation control methods using herbicides. However, if the right-of-way is not in a condition satisfactory to us at any time thereafter, we will maintain the right-of-way using any method we determine appropriate as allowed by our easement rights, and in accordance with all applicable Federal and State laws and regulations.

We discourage landowners from cutting any trees, underbrush, and vines which are within eight (8) feet of the transmission electric wires at any time. If there is any question whether or not trees, underbrush, or vines are clear underneath and to the side, or overhanging the conductors, please contact:

(coordinator) _____, telephone number _____.
For your information, attached is a copy of our requirements entitled "Transmission Easement Right-of-Way Conditions to be Met in Lieu of Herbicide Treatment".

Sincerely,

APPENDIX B

LETTER FORMAT TO BE SENT TO LANDOWNERS WHO OBJECT TO NU'S HERBICIDE USE AND AGREE TO KEEP CLEAR NU'S DISTRIBUTION RIGHTS-OF-WAY EASEMENTS ON THEIR PROPERTY

Dear _____:

This is to confirm our conversation on _____ (date) concerning woody vegetation control of trees, underbrush, or vines on your property within the (CL&P or WMECO, R/W Identity--kv, from/to) right-of-way, in the town of _____, _____ (state) _____.

Our easement on your land allows us to control woody vegetation, including the use of herbicides. However, you have agreed to cut and keep cut the target woody vegetation within the right-of-way.

Target woody vegetation includes all trees and tall maturing shrubs which are capable of growing to touch and short circuit the wires. It includes also, woody vegetation that is capable of interfering with access routes between and at line structures, as described in the enclosed "conditions" page. By doing this, your preferences as well as our requirements would be met.

If the right-of-way is in a condition satisfactory to (CL&P or WMECO) by _____ (date) and kept that way thereafter, it will not be necessary for us to pursue any of our normal woody vegetation control methods using herbicides. However, if the right-of-way is not in a condition satisfactory to us at any time thereafter, we will maintain the right-of-way using any method we determine appropriate as allowed by our easement rights, and in accordance with all applicable Federal and State laws and regulations.

We discourage landowners from cutting any trees, underbrush, and vines which are within six (6) feet of the distribution electric wires at any time. If there is any question whether or not trees, underbrush, or vines are clear underneath and to the side, or overhanging the conductors, please contact:

_____ (coordinator) _____, telephone number _____.

For your information, attached is a copy of our requirements entitled "Distribution Easement Right-of-Way Conditions to be Met in Lieu of Herbicide Treatment".

Sincerely,

RLS/pb
Attachment

APPENDIX B

**NORTHEAST UTILITIES
DISTRIBUTION
EASEMENT RIGHT-OF-WAY CONDITIONS
TO BE MET IN LIEU OF HERBICIDE TREATMENT**

- A. The right-of-way shall be clear at all times of live woody vegetation as follows:
1. Outside of accessways no woody vegetation (including trees, and tall maturing shrubs) shall be present taller than 8 feet, and no woody vines shall be growing on structures or guy wires.

The only exception to this may be shrubs which mature no taller than 12 feet.
 2. To permit access, no woody vegetation except low woody shrubs which mature at a height of 2 feet or less (such as Lowbush Blueberry) shall be present taller than 2 feet at the following locations:
 - a. In a 14 feet wide access way between line structures. The location of the access way shall be designated by the Company's Regional Distribution Tree Clearance Coordinator.
 - b. Outward for a distance of 3 feet around the periphery of each line structure.
- B. All stumps shall be cut as close to the ground as possible, and in no case shall they be cut higher than 3 inches unless used as supports for a fence. If certain trees serve as fence supports, they shall be cut no higher than two (2") inches above the fence. All stumps shall be cut-off at right angles to the stems to avoid leaving sharp points.
- C. If cut-off brush is piled by the land owner within the limits of the cleared portion of the right-of-way, it shall be piled as near to the cleared edges as possible and outside of the outermost electric lines. Each brush pile shall be no higher than 2 feet and no larger on its greatest horizontal dimension than 16 feet, and it shall be separated from any other brush or log pile by at least 6 feet. No brush shall be piled within woods roads, paths, in the access locations described in article A2 above, on guying anchors, or at any other locations designated by the Company's Regional Distribution Tree Clearance Coordinator.
- D. The land owner shall identify with visible markings the boundaries of his property within the right-of-way.

333 CMR: PESTICIDE BOARD

APPENDIX C

333 CMR 11.00: RIGHTS OF WAY MANAGEMENT

Section

- 11.01: Purpose
- 11.02: Definitions
- 11.03: General Provisions
- 11.04: Sensitive Area Restrictions
- 11.05: Vegetation Management Plan (VMP)
- 11.06: Yearly Operational Plan (YCP)
- 11.07: Public Notification
- 11.08: Notice of Modification and Revocation
- 11.09: Right-of-Appeal
- 11.10: Penalties
- 11.11: Effective Dates
- 11.12: Further Review

11.01: Purpose

The purpose of this chapter is to promote the implementation of integrated Pest Management (IPM) Techniques and to establish those standards, requirements and procedures necessary to minimize the risk of unreasonable adverse effects on human health and the environment associated with the use of herbicides to maintain rights-of-way and to establish a statewide and uniform regulatory process. These regulations establish procedures which guarantee amore opportunity for public and municipal agency review and input on right-of-way maintenance plans.

11.02: Definitions

For the purpose of 333 CMR 11.00, the following definitions shall apply.

Agricultural Area, shall refer to but not be limited to actively cultivated gardens, greenhouses, orchards, fields, pastures, and other areas where herbicides might impact adversely on the vegetation under cultivation or agricultural management.

Applicant, shall refer to any person representing federal, state or local governments or agencies, utilities, railroads, pipelines, that intend to maintain a right-of-way by the application of herbicide.

Bailast, shall refer to the coarse gravel or crushed rock on to which the ties, tracks, and any switching, signaling and communication devices of a railroad are laid.

Broadcast, shall refer to any non-selective herbicide application technique which results in application to all vegetation within a target area.

Department, shall refer to the Department of Food and Agriculture Pesticide Treatment, shall refer to any technique which applies herbicide to leaves of the target vegetation.

Habitated Area, shall refer to, but not be limited to residences, schools, hospitals, parks and recreational facilities or other areas in which humans generally live, work or gather.

Low Pressure, shall refer to pressure under 60 psi.

Maps, shall refer to maps which are of such accuracy and scale, as determined by the Department to provide sufficient detail so that sensitive areas can be delineated, or which show bench marks or other permanent structures located on the right-of-way which allow the delineation of sensitive areas.

Person, shall refer to, but is not limited to, an individual, association, partnership, corporation, company, business organization, trust, estate, the commonwealth or its political subdivision, administrative agencies, public or

11.02: continued

quasi-public corporation or body, or any other legal entity or its legal representatives, agent or assign or a group of persons.

Person Aggrieved, shall refer to any person who, because of an act or failure to act by the Department may suffer an injury in fact which is different either in kind or magnitude from that suffered by the general public and which is within the scope of the interests identified in these Regulations. Such person must specify in writing sufficient facts to allow the Department to determine whether or not the person is in fact aggrieved.

Primary Recharge Area, that land area delineated by Zone II as defined in 310 CMR 24.06 or in such cases as the primary recharge area has not been designated it shall be, in the interim, be defined as a one half (1/2) mile radius from the public drinking water supply well unless otherwise determined by the Department of Environmental Quality Engineering.

Rights-of-Way (ROW), for the purpose of this regulation shall refer to any roadway, or thoroughfare on which public passage is made and any corridor of land over which facilities such as railroads, pipeline, powerline, conduit, channel or communication lines are located.

Selective Application, shall refer to the application of herbicide, in such a manner that the delivery to the target vegetation is optimized and delivery to non-target vegetation and the environment is minimized.

Sensitive areas, shall refer to any areas, within rights-of-way, including but not limited to the following, in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects:

- (a) within the primary recharge area of a public drinking water supply well
- (b) within four hundred (400) feet of any surface water used as a public water supply
- (c) within one hundred (100) feet of any appropriately marked private drinking water supply well
- (d) within one hundred (100) feet of any standing or flowing water
- (e) within one hundred (100) feet of any wetland
- (f) within one hundred (100) feet of any agricultural or habituated area

Stem treatment, shall refer to any technique including stump, basal, stem, injection, banding, flail, girdle and any other treatment which delivers herbicide at low pressure to the stump, base or stem of the target vegetation.

Target Vegetation, shall refer to any plant species which has the potential to interfere with the operation of the rights-of-way.

Touch-up application, shall refer to limited application of herbicides following an initial treatment, which is necessary to achieve the desired vegetation control.

Vegetation Management Plan (VMP), shall refer to a long term management plan for the appurtenant rights-of-way system which describes the intended program for vegetation control over a five (5) year period.

VMP Advisory Panel, shall refer to the Vegetation Management Plan Advisory Panel as set forth in 333 CMR 11.05(4).

Yearly Operation Plan (YOP), shall refer to the yearly operational plan which describes the detailed vegetation management operation for the calendar year consistent with the terms of the long term Vegetation Management Plans.

Water Supply, shall refer to any raw or finished water source that is presently used, reserved for future use, or under investigation for future use by a public water system as defined in 310 CMR 22.02, or used as a source of private drinking water by one or more persons. This shall include all land and waters

333 CMR: PESTICIDE BOARD

11.02: continued

used as or tributary to a public water system except those exempted under 310 CMR 22.20.

Wetlands, with the exception of land subject to flooding shall refer to areas subject to protection under M.G.L. c. 131, s. 40 which include the following areas as defined in 310 CMR 10.02(1)(a)-(c):

- | | |
|---|-------------|
| (a) Any bank. | the ocean |
| any freshwater wetland. | any estuary |
| any coastal wetland. | any creek |
| any beach. | bordering |
| any dune. | on |
| any flat. | |
| any marsh. | any river |
| or any swamp | any stream |
| (b) Land under any of the water bodies listed above | any pond |
| (c) Land subject to tidal action | or any lake |

11.03: General Provisions

(1) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way unless appropriately certified by the Department or unless appropriately licensed by the Department and working under the on site supervision of a appropriately certified applicator.

(2) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way except in accordance a Vegetation Management Plan and Yearly Operating Plan approved by the Department. Such documents shall be carried at all times during herbicide application and shall be made available to the Department and appropriate municipal officials of the Conservation Commission and Board of Health upon a reasonable demand.

(3) No person shall handle, mix or load an herbicide concentrate on a right-of-way within one hundred (100) feet of a sensitive area.

(4) The perimeter of any sensitive areas which are not readily identifiable on the ROW shall be appropriately marked prior to any herbicide applications. The precise method used in marking these areas shall be identified in the VMP.

(5) No foliar application of herbicides shall be used to control vegetation greater than twelve (12) feet in height except for side trimming.

(6) No herbicide shall be applied when the wind velocity is such that there is a high propensity to drift off target and/or during measurable precipitation.

(7) No person shall apply herbicides by aircraft for the purpose of clearing or maintaining a right-of-way.

(8) No touch-up applications shall be carried out except under the following conditions:

- (a) Touch-up applications must occur within twelve (12) months of the date of approval of the YOP.
- (b) The Department, the Conservation Commission, Board of Health, and Chief elected official of the municipality shall be notified by registered mail at least twenty-one (21) days prior to any application.
- (c) No more than ten percent (10%) of the initially identified target vegetation on the applicants right-of-way in any municipality may be treated and the total amount of herbicide applied in any one year shall not exceed the limits specified by the label or Yearly Operational Plan.
- (d) The Department may impose such additional restrictions or conditions on the use of herbicides as it deems necessary to protect public health and the environment.

(9) Notwithstanding 333 CMR 11.03(2), until September 15, 1987, herbicides may be used for the purpose of clearing or maintaining a railroad rights-of-way

11.03: continued

without a Vegetation Management Plan or Yearly Operational Plan approved by the Department provided that:

- (a) for application of herbicides within one hundred (100) feet of a wetland the applicant must obtain a certification that said application is necessary for the protection of the health and safety of the citizens of the Commonwealth and is to be performed or is directed to be performed by an agency of the Commonwealth or federal government.
- (b) the application is performed in accordance with all other requirements contained in 333 CMR 11.03 and 11.04; and
- (c) prior to or at the time of application of herbicides within one hundred (100) feet of a wetland, the applicant must delineate wetlands and mark the 10 foot set back from the wetland boundary, within which no application of herbicides may occur pursuant to 333 CMR 11.04(4)(a), in accordance with the following procedures:
 - 1. the person making such delineation must submit to the DEQE a statement of qualifications demonstrating expertise in wetland boundary delineation;
 - 2. the conservation commission in each town in which herbicides are to be applied shall be given the opportunity to accompany and observe the expert during the wetland boundary delineation;
 - 3. notice of the date, time and location of said delineation shall be given to the conservation commission at least ten (10) days prior thereto;
 - 4. if the wetland boundary delineation occurs prior to the application of herbicides, the delineation of the wetlands and the ten (10) foot set back must be marked in a manner that will remain visible to the person applying herbicides;
 - 5. herbicides may only be applied within nine (9) feet of the centerline of the track; and
 - 6. only herbicides which have been found suitable for use in sensitive areas pursuant to 333 CMR 11.04(1)(d) may be applied.

11.04: Sensitive Area Restrictions(1) General

- (a) No more than the minimum labelled rate of the pesticide product for the appropriate site, pest, and application method shall be applied.
- (b) Herbicides applied in sensitive areas shall be applied selectively by low pressure foliar techniques or stem application.
- (c) No person shall apply herbicides for the purpose of clearing or maintaining a right-of-way in such a manner that results in drift to any area within ten (10) feet of standing or flowing water in a wetland or area within four hundred (400) feet of a public drinking water supply well; or area within one hundred (100) feet of any surface water used as a public water supply; or area within fifty (50) feet of a private drinking water supply marked in accordance with 333 CMR 11.04(2)(c)3.
- (d) The Department, in cooperation with the Department of Environmental Quality Engineering, and subject to a Memorandum of Understanding will evaluate herbicides currently registered for use on rights-of-way and will distribute a list of herbicides recommended for use in sensitive areas and guidelines for their use. The Memorandum of Understanding will set forth a procedure for this evaluation based on all available data relative to environmental fate and toxicity. Such list, guidelines and procedures will be subject to review and comment by the Department of Public Health provided that such comments are provided to the Department within a reasonable time. The Department, on August 15 of the calendar year, will make available the list and guidelines to applicants and to the VMP Advisory Committee. Applicants proposing to use an herbicide which has been registered for use on rights-of-way but has not yet been evaluated pursuant to the provisions of the Memorandum of Understanding may request that such herbicides be evaluated pursuant to said provisions. For an herbicide which has been evaluated pursuant to the provisions of the Memorandum of Understanding, applicants proposing to use such herbicide in a manner inconsistent with the terms and conditions of use imposed in the guidelines may request a modification or waiver of such terms or conditions. A

11.04: continued

request for such modification or waiver shall provide a detailed rationale for use, including all relevant data including but not limited to environmental fate, efficacy and human health effects of the proposed herbicide. Such herbicides and/or uses shall be subject to the evaluation standards adopted by the Departments of Food and Agriculture and Environmental Quality Engineering in the Memorandum of Understanding.

Commentary

Applicants subject to the provisions of the Wetlands Protection Act, who wish to apply pesticides registered for use in Massachusetts to right-of-ways, may choose to apply herbicides determined to be suitable for use in sensitive areas in accordance with the provisions of the Memorandum of Understanding mentioned above or alternatively, applicants may proceed pursuant to the provisions of 310 CMR 10.00 as authorized by M.G.L. c. 131, s. 40.

(e) The Department may impose such additional restrictions or conditions on the use of herbicides within or adjacent to sensitive areas as it determines necessary to protect human health or the environment. Such changes may be proposed by a municipal agency or individual during the public comment period.

(2) Water Supplies.

(a) Public Ground Water Supplies.

1. No herbicides shall be applied within four hundred (400) feet of any public ground water supply well.
2. No herbicides shall be applied within the primary recharge area of a public ground water supply well except under the following conditions:
 - a. A minimum of twenty-four (24) months shall elapse between applications; and
 - b. Herbicides shall be applied selectively by stem application or low pressure foliar techniques.

(b) Public Surface Water Supplies.

1. No herbicide shall be applied within one hundred (100) feet of any surface water used as a public water supply.
2. No herbicide shall be applied between one hundred (100) feet and four hundred (400) feet of any water used as a public water supply except under the following conditions:
 - a. A minimum of twenty-four (24) months shall elapse between applications; and
 - b. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.

(c) Private Drinking Water Supplies.

1. No herbicide shall be applied on or within fifty (50) feet of any private drinking water supplies marked in accordance with 333 CMR 11.04(2)(c)3.
2. No herbicide shall be applied between fifty (50) feet and one hundred (100) feet of any private drinking water supply marked in accordance with 333 CMR 11.04(2)(c)3, except under the following conditions:
 - a. A minimum of twenty-four (24) months shall elapse between applications; and
 - b. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.
3. Any private drinking water supply located within one hundred (100) feet of any right-of-way, in order to be protected, must be marked by the property owner by placing a sign on the edge of the ROW perpendicular to the location of the private drinking water supply. The sign shall be blue in color with white lettering and shall be placed at least five (5) feet above the ground in plain view and shall read "Well" and state the distance and location from the well to the ROW. The location of the private drinking water supply shall be reported by the property owner to the municipal Board of Health or other appropriate official designated by the Mayor or the Board of Selectmen so that the position of these private drinking water supplies may be located on municipal map. This information shall be made available to any applicator or applicant for use in the delineation of private drinking water supplies on the maps and in the YOP.

11.04: continued

(3) Surface Waters.

- (a) No herbicide shall be applied on or within ten (10) feet of any standing or flowing surface water which is not a public water supply.
- (b) No herbicides shall be applied between ten (10) feet and one hundred (100) feet of any standing or flowing surface water which is not a public water supply except under the following conditions:
 1. A minimum of twelve (12) months shall elapse between applications; and
 2. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.

(4) Wetlands.

- (a) No herbicide shall be applied within ten (10) feet of a wetland.
- (b) No herbicide shall be applied between ten (10) feet and one hundred (100) feet of a wetland except under the following conditions:
 1. A minimum of twelve (12) months shall elapse between applications; and
 2. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.
- (c) Notwithstanding 333 CMR 11.04(4)(a), public utilities providing electric, gas, water, telephone, telegraph and other telecommunication services may apply herbicides on or within ten (10) feet of a wetland in accordance with the following conditions:
 1. Submission of a study, the design of which is subject to prior approval of the Department of Food and Agriculture and Environmental Quality Engineering, evaluating impacts of proposed vegetation management programs on wetlands.
 2. A finding by the Department, after consultation with the Advisory Committee, that the proposed vegetation management program will result in less impacts to the wetland than mechanical control.
 3. Notwithstanding the above, no herbicides shall be applied within ten (10) feet of any standing or flowing water in a wetland.

(5) Habitated and Agricultural Areas.

- (a) No high pressure foliar herbicide applications shall be carried out within one hundred (100) feet of any habitated or agricultural area during the growing season.
- (b) No foliar herbicide shall be applied within one hundred (100) feet of any habitated or agricultural area during the growing season except under the following conditions:
 1. A minimum of twelve (12) months shall elapse between applications; and
 2. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.

11.05: Vegetation Management Plan (VMP)(1) General.

- (a) Unless otherwise specified by the Department, all VMP's shall be submitted by the applicant no later than September 1 prior to the calendar year of the proposed first year of maintenance. All approved VMP's shall take effect on January 1 unless otherwise specified by the Department, and shall be effective for a five (5) year period unless otherwise modified, or revoked by the Department.
- (b) The VMP shall be presented on forms approved by the Department.

(2) Requirements. The VMP shall include but not be limited to the following:

- (a) General statement of goals and objectives of the VMP.
- (b) Identification of target vegetation
- (c) Intended methods of vegetation management and rationale for use, including: vegetation control techniques, equipment proposed for use and timing of applications and other control procedures.
- (d) Justification of herbicide applications proposed.
- (e) Methods, references and sources for identifying sensitive areas and control strategies proposed for sensitive areas.

11.05: continued

- (f) Operational guidelines for applicators relative to herbicide use.
- (g) Identification and qualifications of individuals developing and submitting plan.
- (h) A description of Integrated Pest Management Programs or other techniques/programs to minimize the amount and frequency of herbicide application.
- (i) Description of alternative land use provisions or agreements that may be established with individuals, state, federal, or municipal agencies that would minimize the need for herbicides including the rationale for accepting or denying any reasonable request made by any individual municipal, state or federal agency.
- (j) Remedial plan to address, spills and related accidents.

(3) Public Notice & Comment.

- (a) Upon submittal to the Department, notice of the VMP shall be published by the applicant in the Environmental Monitor. Said notice shall include the following information:

1. A list of all municipalities through which the herbicide treated ROW pass.
2. A description of the intended five (5) year program.
3. Procedure established by the Department for public comment review and comment.

- (b) Upon receipt of the proposed VMP the Department shall schedule and hold appropriate regional public meetings, affording all interested parties the opportunity to comment on the proposed plan.

- (c) Public Comments shall be accepted by the Department for a period of forty-five (45) days following receipt of the VMP unless extended by the Department for good cause.

(4) VMP Advisory Panel.

- (a) There shall be a VMP Advisory Panel charged with the responsibility of reviewing Vegetation Management Plans and the accompanying public comments. They shall recommend approval, denial or modification to the Department.

- (b) The panel shall consist of the Commissioner(s) or designees of the following Departments:

Department of Food and Agriculture, non-voting
 Department of Environmental Quality Engineering
 Department of Public Health
 Department of Public Works and

a representative appointed by the Commissioner of DFA from each of the following groups:

Massachusetts Association Conservation Commissions:

Massachusetts Association of Health Boards:

University of Massachusetts/Extension Service:

railroads:

utilities:

applicator, and
 environmentalist

A member shall be appointed for a term of one, two or three years. Appointed members shall serve at the discretion of the Commissioner. No member shall serve more than six (6) consecutive years. Appointed panel members shall serve without compensation and shall not be reimbursed for any expenses incurred by them in the performance of their duties. The Commissioner of the Department or designee shall serve as an ex officio non-voting member to the VMP Advisory Panel.

(c) The Department of Food and Agriculture Representative shall chair the VMP Advisory Panel. This chairperson shall coordinate efforts of the Department and the Panel to process the VMPs.

(d) The VMP Advisory Panel shall conduct business in accordance with the time, place and to procedures agreed upon.

(e) The VMP Advisory Panel shall review all complete VMPs' including all written and public hearing comments. Within thirty (30) days of receipt of the above materials unless extended for good cause, the panel shall recommend to the Department in writing approval, denial or modification of each VMP.

11.05: continued

(5) Disposition of VMP.

- (a) Twelve (12) copies of VMP shall be submitted to the Department no later than September 1 unless otherwise specified by the Department prior to the calendar year of the proposed first year of maintenance.
- (b) Within thirty (30) days of receipt of the Public Comments and VMP unless extended for good cause, the VMP Advisory Panel shall review the VMPs and recommend in writing to the Department approval or denial for each VMP, if necessary, request from the applicant additional information.
- (c) Within thirty (30) days of receipt of the Advisory Panels recommendation unless extended by the Department for good cause, the Department will notify the applicant, municipal agencies, and individuals commenting in writing (including the written recommendations of the Advisory Panel) one of the following:

 1. Request for additional information or modification; or
 2. Denial of the VMP; or
 3. Approval of the VMP

- (d) The VMP may be modified, withdrawn or amended by the applicant through a written request sent by certified mail to the Department.
- (e) Resubmission of a denied VMP, updating of a VMP, or a significant amendment to an approved VMP shall be processed according to 333 CMR 11.05.

(6) Time for Action. Non action on a Vegetation Management Plan within time specified herein does not constitute approval of the submitted plan. In the event that the Department fails to notify the applicant of a decision within the time specified above and upon written request from the applicant, the Commissioner must issue a finding within ten (10) days of receipt stating the reason for the delay and providing an estimated completion date.

11.06: Yearly Operational Plan (YOP)

(1) General.

- (a) The applicant is responsible for the accuracy and completeness of all information submitted with the YOP. The YOP shall be consistent with the objectives of the VMP and shall describe the intended operational program for that calendar year.
- (b) The YOP shall be presented on forms approved by the Department.

(2) Requirements. The YOP shall include but not be limited to the following:

- (a) Maps locating the ROW and Sensitive areas not readily identifiable in the field.
- (b) Herbicides proposed including application rates, carriers, adjuvants.
- (c) Herbicide application techniques and alternative control procedures proposed.
- (d) The company which will perform any herbicide treatment.
- (e) Identification of target vegetation.
- (f) Individual representing applicant supervising YOP.
- (g) Flagging methods to designate sensitive areas on the ROW.
- (h) Herbicide Fact Sheets as approved by the Department.
- (i) Procedures and locations for handling, mixing and loading of herbicide concentrates.

(3) Public Notice & Comment. Upon submittal to the Department, notice of the YOP shall be published by the applicant in the Environmental Monitor. Said notice shall include the following information:

- (a) A list of all municipalities through which the herbicide treated ROW pass.
- (b) A description of the intended program including estimated start of application and identification and location of the right-of-way.
- (c) Procedure established by the Department for public review and comment.

(4) Disposition of Plan.

- (a) The YOP shall be submitted by the applicant to the Department at least ninety (90) days prior to the proposed commencement of application.

11.06: continued

- (b) The Department shall review the YOP to ensure that the YOP is consistent with the approved VMP. Any inconsistencies or deficiencies will be noted by the Department and returned to the applicant.
- (c) Where practical, the Department shall approve or deny the YOP within ninety (90) days of receipt. The Department will provide notice of the decision to the applicant, municipal agencies and commentors in writing.
- (d) The approved YOP in conjunction with the VMP shall govern the application of herbicide for a period not to exceed twelve (12) months in accordance with other laws and regulations of the State and Federal government and impose such conditions as necessary to minimize the risk of adverse effects on human health and the environment.
- (5) Time for Action. Non action on a Yearly Operational Plan within time specified herein does not constitute constructive approval of the submitted plan. In the event that the Department fails to notify the applicant of a decision within the time specified above and upon a written request from the applicant the commissioner must issue a finding within ten (10) days of receipt stating the reason for the delay and providing an estimated completion date.

11.07: Public Notification

The applicant shall provide notice by registered mail, at least twenty-one (21) days in advance of the application of herbicide to the right-of-way to the Mayor, City Manager or Chairman of the Board of Selectman, Board of Health, Conservation Commission in the municipality where the right-of-way lies. The notice shall include but not be limited to an approved copy of the YOP; the approximate dates on which such spraying shall commence and conclude, provided however, that said spraying shall not conclude more than ten (10) days after said approximate date; a copy of a DFA approved Herbicide Fact Sheet on the active ingredient(s) of the herbicide(s) used; the name and address of contractor who will make the application or the name of the certified employee who will make the application. A copy of this notification shall be sent by the applicant to the DFA Pesticide Bureau.

11.08: Notice of Modification and Revocation

- (1) The Department may suspend approval of any VMP or YOP, by written notice to the applicant and applicator, halting the application of herbicide to that right-of-way of the above mentioned YOP. After twenty-one (21) days if the applicant does not request a hearing, the Department may revoke or modify the VMP and YOP, if it finds:
 - (a) that the terms, conditions of restrictions thereof, are being violated or are inadequate to avoid unreasonable adverse affects on the environment or on human health; or
 - (b) that the applicants has made a false or misleading statement in the VMP or YOP; or
 - (c) that the applicant has violated any provision of the Massachusetts Pesticide Control Act or FIFRA, or any regulations, standards, orders or license issued under either.
- (2) Upon notice of revocation or modification, the applicant may modify the YOP by written request to the Department. Applications to modify the YOP shall be submitted in a manner set forth in 333 CMR 11.06 and disposed of in the manner set forth in 333 CMR 11.06. The Department may waive all or part of the requirement if it determines that the proposed changes do not significantly change the terms of the approved YOP.

11.09: Rights of Appeal

Any person aggrieved by the decision of the Department to approve, deny, modify or revoke an Vegetation Management Plan or Yearly Operational Plan may request an adjudicatory hearing. The request for a hearing must be sent to the Department by Certified mail or hand delivered within twenty-one (21) days after the date of decision or notice by the Department. At the same time the

11.09: continued

request for a hearing must be sent by Certified mail or hand delivered to the applicant and the Pesticide Board. The request should state clearly and concisely the facts of the proceeding, the reasons the decision is alleged to be inconsistent with 333 CMR 11.00 and the relief sought by the adjudicatory hearing. The adjudicatory hearing before the Pesticide Board shall be conducted as set forth in M.G.L. c. 30A and M.G.L. c. 132B, s. 13.

11.10: Penalties

Any person who violates any provision of 333 CMR 11.00 shall be subject to the criminal and civil penalties set forth in M.G.L. c. 132B, s. 14.

11.11: Effective Dates

For implementation of these regulations, applicants shall be subject to the following schedule of effective dates:

- (a) January 1, 1988 for applicants proposing to maintain railroad rights-of-way by the application of herbicides.
- (b) Notwithstanding 333 CMR 11.11(a), upon filing with the Secretary of the Commonwealth for application of herbicides pursuant to 333 CMR 11.03(9).
- (c) January 1, 1989 for applicants proposing to maintain electric utility, pipeline, powerline, conduit, channel or communication line right-of-way by application of herbicides.
- (d) January 1, 1990 for applicants proposing to maintain a roadway right-of-way by the application of herbicides.

11.12: Further Review

These regulations will expire and become void twenty-four (24) months after the date of promulgation unless reapproved by the Board.

REGULATORY AUTHORITY

333 CMR 11.00: M.G.L. c. 132B.

PART B

LOCAL DISTRIBUTION

VEGETATION MANAGEMENT PLAN

FOR

WESTERN MASSACHUSETTS ELECTRIC COMPANY

HOLYOKE WATER POWER COMPANY

HOLYOKE POWER AND ELECTRIC COMPANY

1989 THROUGH 1993

TABLE OF CONTENTS

	PAGE
I. INTRODUCTION	B1
II. GOALS AND OBJECTIVES	B2
III. IDENTIFICATION OF TARGET VEGETATION	B4
IV. METHOD OF VEGETATION MANAGEMENT AND RATIONALE FOR USE	B5
V. JUSTIFICATION OF HERBICIDES	B7
VI. IDENTIFICATION OF SENSITIVE AREAS AND CONTROL STRATEGIES PROPOSED FOR SENSITIVE AREAS	B10
VII. OPERATIONAL GUIDELINES FOR APPLICATORS	B14
VIII. INTEGRATED PEST MANAGEMENT PROGRAM	B18
IX. ALTERNATIVE LAND USE PROVISIONS AND AGREEMENTS MINIMIZING THE NEED FOR HERBICIDES	B20
X. REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS	B21

APPENDIX

APPENDIX A	IDENTIFICATION AND QUALIFICATIONS OF INDIVIDUALS DEVELOPING AND SUBMITTING PLAN	B24
APPENDIX B	LETTER FORMAT AND CONDITIONS TO BE MET IN LIEU OF HERBICIDE TREATMENT	B25
APPENDIX C	COMMONWEALTH OF MASSACHUSETTS 333 CMR 11.00 RIGHTS-OF-WAY MANAGEMENT	B27

INTRODUCTION

This Vegetation Management Plan (VMP) describes Western Massachusetts Electric Company's (WMECO), Holyoke Water Power Company's (HWP), and Holyoke Power and Electric Company's (HPE) (hereinafter collectively referred to as "The Company") integrated vegetation control program for local distribution lines over the 5-year period from 1989 through 1993 in compliance with Commonwealth of Massachusetts 333 CMR 11.00, Right-of-Way Management. A separate VMP has been prepared describing The Company's integrated vegetation control program for transmission and distribution rights-of-way over a 5-year period from 1989 through 1993 in compliance with 333 CMR 11.00.

Environmental Consultants, Inc. is currently conducting a study to evaluate the impacts of proposed vegetation management programs on wetlands. The Massachusetts Department of Food and Agriculture (DFA) will review the proposed management program to determine if it will result in less impact on wetlands than mechanical control. Their finding will influence restrictions placed on wetland sensitive areas.

I. GOALS AND OBJECTIVES

This section summarizes the goals and objectives of this vegetation management plan.

A. Goals of Vegetation Management Plan

The primary goal of this electric utility vegetation management plan is the control of vegetation and establishment of standard operating procedures to ensure the maintenance of safe and uninterrupted electric service along local distribution lines. Access for off-road lines must also be assured in order to permit routine and emergency line maintenance and operations which are essential to preserve continuity and reliability of service.

This plan is a guiding document which provides structure and sensibility to the Yearly Operational Plans (YOP's). At least one YOP will be prepared each year to describe the detailed vegetation management operation for the calendar year consistent with the terms of the VMP's.

B. Objectives of Vegetation Management Plan

The principal objective of this vegetation management plan is to selectively eliminate that woody vegetation which may potentially short circuit overhead conductors. This Management Program will accomplish that objective at the lowest possible cost to its customers with due regard for worker safety, protection of public health, and while minimizing unreasonable adverse effects on the environment, including the protection of sensitive areas. The program is designed to maintain acceptable appearance of cleared local distribution lines and to minimize erosion by allowing the development of low-shrubs and ground cover. Wildlife habitat is enhanced along off-road lines for a wide variety of animals through the development of a complex plant community.

This VMP makes a major commitment to incorporate integrated pest management (IPM) techniques and other strategies to minimize the use of herbicides without reducing service reliability. A balanced combination of cultural and natural controls with prudent amounts of herbicides are used to selectively control undesirable plants while fostering the growth of low-growing species. All grasses and herbs, and most shrubs are normally considered desirable, and they are preserved and encouraged to grow. These low-growing species inhibit the re-establishment of target tree species, and each selective herbicide application reduces the number of target tree saplings present. Therefore, herbicide use is minimized because less herbicide is required with each successive treatment, made approximately every four years as a direct result of integrated pest management.

The foregoing are accomplished in full compliance with all applicable State and federal laws and regulations.

C. Sensitive Areas

Special protection is afforded sensitive areas in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects. Buffer zones are established near public and private water supplies, standing or flowing water, wetlands, and agricultural and habituated areas where herbicide use is restricted.

D. Public Involvement

Public involvement is imperative to the development of an all-encompassing, socially acceptable vegetation management plan. Regulatory procedures have been established which guarantee all interested parties ample opportunity for input and review. In addition, alternative land use options are available which preclude the use of herbicides. In total, this vegetation management plan provides a comprehensive and integrated framework which protects the environment and the health, safety, and welfare of the Citizens of the Commonwealth.

E. Location of Local Distribution Lines

The Company's service area extends from the Berkshire Mountains bordering New York State to the highly urbanized area surrounding Springfield, and reaches in a north-south direction from the Vermont-New Hampshire border to Connecticut.

The Massachusetts portion of Northeast Utilities (NU) is comprised of three subsidiaries across western Massachusetts. WMECO's transmission and distribution facilities provide electrical service to over 189,000 customers. HWP has transmission and distribution facilities which serve industrial customers in Holyoke. HPE has transmission and distribution facilities in the Town of South Hadley and the City of Chicopee.

Electric service is delivered through 3,514 pole miles of local distribution lines across the region. Of these local distribution lines approximately 90% are located along roads and driveways, bordering on a variety of privately and publicly owned land. The other 10% are off-road lines which cross property with a wide range of land uses including forestland, agricultural and recreational areas, and backyards. The Company's local distribution lines are located in the following 63 municipalities:

Agawam	Dalton	Lee	Peru	Sunderland
Amherst	Deerfield	Lenox	Pittsfield	Tolland
Ashfield	Easthampton	Leverett	Plainfield	Tyringham
Becket	Erving	Leyden	Richmond	Washington
Bernardston	Gill	Longmeadow	Russell	West Springfield
Blandford	Granville	Ludlow	Sandisfield	Westfield
Buckland	Greenfield	Middlefield	Savoy	Westhampton
Cheshire	Hadley	Montague	Shelburne	Whately
Chester	Hancock	Montgomery	Shutesbury	Wilbraham
Chesterfield	Hatfield	New Ashford	Southampton	Windsor
Colrain	Hinsdale	Northfield	Southwick	Worthington
Conway	Huntington	Otis	Springfield	
Cummington	Lanesborough	Pelham	Stockbridge	

III. IDENTIFICATION OF TARGET VEGETATION

The primary objective of electric utility vegetation management is the selective control of those woody plants capable of growing tall enough to interfere with the conductors and access. This section identifies this tall-growing, "target vegetation" by plant species.

A. Plant Species

For the purposes of electric utility vegetation control, plant species are generally divided into two groups, undesirable species capable of growing into the conductors, and desirable species which normally cannot. It is the contractor's responsibility to be knowledgeable about and to instruct his crews in the identification of target vegetation. These groups are defined below:

1. Undesirable Species - Undesirable species include trees, brush, and vines. Trees are woody plants normally maturing at 20 feet or more in height, usually with a single trunk, unbranched for several feet above ground and with a definite crown. Trees have a diameter at breast height (DBH) of 6 inches or greater. Brush is a tree species with a DBH of less than 6 inches. Undesirable tree species with sproutable cut-off stumps such as poplar (Populus spp.), pitch pine (Pinus rigida), and red maple (Acer rubrum) are capable of growing into the conductors and are usually controlled. Woody vines such as wild grape (Vitis spp.) and Virginia creeper (Parthenocissus quinquefolia) are also controlled when they risk electric reliability by climbing poles and guy wires.
2. Desirable Species - Desirable species include low-growing shrubs, ferns, grasses, and herbs. Shrubs are woody plants normally maturing less than 20 feet in height and presenting a generally bushy appearance because of its several erect spreading or prostrate stems. Most shrubs such as mountain laurel (Kalmia latifolia), highbush blueberry (Vaccinium corymbosum) and hazelnut (Corylus americana) usually cannot grow into the conductors and are normally preserved and encouraged to grow. Non-woody plant species such as ferns, grasses, and herbs benefit from the reduced competition for space and are allowed to flourish.

B. Trimming and Removal

Target species are either trimmed or removed in order to keep them free of contacting the conductors for at least four years as follows:

1. Brush capable of interfering with the wires is removed.
2. Dead, decayed, severely insect damaged, structurally weak, and poorly root anchored trees that endanger conductors are removed.
3. Healthy trees are trimmed, rather than removed, where adequate clearance can be maintained.

METHOD OF VEGETATION MANAGEMENT AND RATIONALE FOR USE

This section describes the intended methods of vegetation management and rationale for use, including vegetation control techniques, equipment proposed for use, timing, and other control procedures. An integrated approach to vegetation management has been developed which minimizes the use of herbicides through a balanced mix of cultural practices, natural strategies, and a carefully planned program of chemical control. State-of-the-art techniques, time tested methods, and a low input approach to vegetation control are incorporated into an interdisciplinary plan. Above all else, a major commitment is made to the protection of human health and safety, and the prevention of unreasonable adverse effects on the environment. Vegetation control is scheduled so approximately one quarter of the local distribution lines are inspected at approximate four year intervals and maintained if necessary to ensure the integrity of the electric system.

A. Selective Herbicide Control

The cut stump technique is currently the only selective herbicide method used to control vegetation along The Company's local distribution lines. Selective herbicide control is used because it allows the user to regulate the density and composition of the resulting plant community, enhances wildlife habitat for many species of animals, is the most economical means of control, and does not cause unreasonable adverse effects on human health or the environment when used according to label directions. Only federal and State approved herbicides are applied.

1. Cut Stump Technique

The cut stump technique involves the treatment of cut-off sproutable stumps in order to chemically control the root system. Stump treatments are made to insure movement of the herbicide into the root system to prevent resprouting. The application is targeted towards the cut surfaces of stumps and especially the cambium layer next to the bark. The herbicide is absorbed into the stump's transport system to disrupt the cambium and prevent emergence of dormant buds within the exposed bark and root collar zone.

The herbicide is applied with hand-operated spray bottles, paint brushes, or 1 to 3 gallon capacity, portable sprayers with a hand pump for low pressure application. Treatment is made by the end of the same day the stump is cut before any regrowth has begun and before becoming covered with snow, ice, leaves, or debris. Cut stump treatments are not made when the wind velocity is such that there is a high propensity to drift off target and/or during measurable precipitation. Applications directed only to the cut stump surface result in generally complete drift control.

B. Cutting

Cutting of target vegetation without the application of herbicide to control sprouting is conducted in sensitive areas and in accordance with weather conditions. Cutting is accomplished through hand cutting or mowing. These same techniques are used prior to herbicide treatment described under Section IV.A.1.

1. Hand Cutting

Hand cutting with gasoline powered chain saws and brush saws is the primary means of severing target stems along local distribution lines. Cuts are made as close to the ground as possible, usually leaving no stumps greater than 3 inches in height. Hand-cutting operations may be conducted any time of the year except when deep snow prevents the cutting of low stumps.

2. Mowing

Mowing is conducted infrequently along local distribution lines in remote, accessible locations. It is sometimes used to recapture heavily overgrown off-road lines. Plant stems are severed using a tracked or rubber tired off-road vehicle mounted with a cutting device. Normally a mower deck is fitted with a rotary type cutter head capable of mowing small woody vegetation. Mowers are selective only in that the mowing head may be turned off or lifted when encountering desirable species or the machine can simply be maneuvered around non-target species. Normal cutting action of the mower disposes the brush into a biodegradable mulch along the power line.

V.

JUSTIFICATION OF HERBICIDES

The Company's vegetation management plan accomplishes the overall goal of continuous and reliable electrical service at a reasonable cost to our customers while placing primary importance on health, safety, and environmental protection. This section compares the relative benefits of the cut-stump technique with other methods and describes why herbicides are an essential part of an effective vegetation management program.

A. Regulation of Stem Density and Plant Composition

Cut stump treatments provide significant advantages in decreasing the density of target vegetation and encouraging the development of compatible plant communities. A long term reduction in the number of tree stems can be achieved by halting the regrowth of tree sprouts and allowing shrub species to dominate. A dense, low-growing plant community and grass cover becomes established where fewer stems require treatment. Each subsequent stump treatment further reduces the number of target stems; therefore less herbicide is required for each future treatment.

B. Wildlife Habitat

Conclusive studies have proven that selective herbicide applications significantly enhance wildlife habitat for many species of animals through the development of a complex relatively stable plant community. A mosaic of low-growing plant species interspersed with tall-growing tree sprouts along off-road lines provide an environment and edge habitat beneficial to a wide variety of wildlife species. Deer, songbirds, and a multitude of other game and non-game species prefer these areas for food, cover, and natural corridors of travel.

C. Economics

Economics refers to the costs of the various management techniques and the effectiveness of a particular method in controlling target species. Since effective control of target species is paramount to a successful vegetation management program, optimum control is achieved through those options which achieve the most reasonable annual cost per acre projected over the long term.

A vegetation management plan based solely on cutting would be cost prohibitive. Hand cutting and/or mowing without the benefit of herbicides allows the root systems of cut-off sproutable stumps to remain alive. Dormant or adventitious buds located on the root or stumps quickly develop into sprouts, often during the same year of cutting. Instead of a single stem which existed prior to cutting, a cluster of sprouts soon becomes established. Since a developed root system is already present, the growth rates of the newly formed sprouts is much faster than the normal growth rate of the tree. In fact, dense sprouts approximately 7 feet tall have occurred during the first full growing season immediately following cutting.

A hand cutting or mowing program would require repeated reclearing of brush due to resprouts approximately 2 to 3 times more frequently than selective herbicide treatments. Development of a low growing plant community is virtually impossible without herbicides because tree sprouts quickly overshadow and crowd out the more desirable species. While warranted under certain conditions, the lack of sprout control, and necessity for more frequent maintenance reduce the long term cost effectiveness of cutting without herbicide treatment.

D. Intensive Herbicide Regulation

Herbicides applied along The Company's local distribution lines are strictly regulated by federal and State agencies. The U.S. Environmental Protection Agency (EPA) requires extensive developmental testing to demonstrate the product can be used to control plants and will not cause unreasonable adverse effects to health and the environment. Biological effectiveness studies ensure that the chemical performs in accordance with claims, toxicity tests assess biological effects, and metabolism/degradation research determine the fate of herbicides in soil, water, plants, and animals.

Toxicity is a measure of how poisonous a pesticide is. Toxicity studies have demonstrated that herbicides are generally the least harmful class of pesticides to mammals, birds, and fish. The underlying reason is that most herbicides control vegetation by interfering with metabolic processes that are not important in animals. The herbicides The Company uses for local distribution line vegetation control are rated slightly toxic, do not bioaccumulate in living tissue, and, if ingested, are readily eliminated from animals via natural processes.

Only after the EPA is convinced that the herbicide will not cause unreasonable adverse effects to humans, animals, or the environment, can the product be registered by the EPA and then approved for use in Massachusetts by the State Department of Food and Agriculture (DFA). The approved herbicides are applied by contractors that are licensed or certified by the State to insure that herbicide label directions and precautions are strictly adhered to. The Company's policy requires contractors to comply with all applicable federal and State laws and regulations.

E. Environmental Impacts

Herbicides used along The Company's local distribution lines do not cause unreasonable adverse effects to the environment when used in accordance with label directions. Herbicides are applied only occasionally and in a diluted form. Vegetation is normally inspected every four or more years and treated only when necessary. Herbicides applied along The Company's local distribution lines are not persistent in soil, but rapidly disappear due to microbial degradation, photodecomposition, absorption to soil colloids, and chemical decomposition. Because these herbicides do not persist long enough for significant leaching to occur, it is improbable that movement throughout the soil into groundwater will result.

F. Traffic Safety and Snow Removal

Maintaining target vegetation with herbicides along roadside powerlines provides significant advantages in improving traffic safety. Roadways properly cleared of vegetation allows for driver visibility and reduces the potential of fallen branches and trees which may cause accidents. Properly maintained roadside powerlines also help provide a location for depositing plowed snow.

G. Integrated Vegetation Control

While the cut stump technique is the primary method of controlling undesirable vegetation along local distribution lines, under certain site conditions, the use of herbicides is not appropriate and cutting operations are conducted without them. Also, handcutting and mowing have a certain range of site conditions under which they are applicable. Conditions which determine the control technique include sensitive areas, weather, location of power lines along roadsides or off-road lines, height of vegetation, access, etc. Since these factors vary from one power line to the next, the proper control technique must be suited to the actual site conditions. These factors are recognized in selecting the appropriate control technique applicable to the power line.

IDENTIFICATION OF SENSITIVE AREAS AND CONTROL STRATEGIES PROPOSED FOR SENSITIVE AREAS

This section defines sensitive areas, provides references and sources for identifying sensitive areas, outlines the method used to identify sensitive areas, and lists the control strategies proposed for sensitive areas.

A. Definition of Sensitive Areas

Sensitive areas are defined in 333 CMR 11.02 as "any areas, within rights-of-way, including but not limited to the following, in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects:

- (a) within the primary recharge area of a public drinking water supply well
- (b) within four hundred (400) feet of any surface water used as a public water supply
- (c) within one hundred (100) feet of any appropriately marked private drinking water supply well
- (d) within one hundred (100) feet of any standing or flowing water
- (e) within one hundred (100) feet of any wetland
- (f) within one hundred (100) feet of any agricultural or habituated area."

The following table shows the no herbicide treatment zone and the surrounding limited herbicide treatment zone within each sensitive area type.

SENSITIVE AREA - NO HERBICIDE AND LIMITED HERBICIDE TREATMENT ZONES

<u>No Herbicide Treatment Zone</u>	<u>Surrounding Limited Herbicide Treatment Zone</u>
<u>PUBLIC GROUND WATER SUPPLY WELL</u> Within 400 feet of it	Between 400 feet from it and the outer boundary of its primary recharge area.
<u>SURFACE WATER USED AS A PUBLIC WATER SUPPLY</u> Within 100 feet of it	Between 100 feet and 400 feet from it.
<u>PRIVATE DRINKING WATER SUPPLY</u> Within 50 feet of it	Between 50 feet and 100 feet from it.
<u>STANDING OR FLOWING SURFACE WATER</u> Within 10 feet of it	Between 10 feet and 100 feet from it.
<u>*WETLAND</u> Within 10 feet of it	Between 10 feet and 100 feet from it.
<u>AGRICULTURAL OR HABITATED AREA</u> No <u>high pressure foliar</u> applications within 100 feet of it during the growing season	Only <u>low pressure foliar or stem</u> applications within 100 feet of it during the growing season.

Note: *If the DFA finds from the wetlands study (performed in accordance with 333 CMR 11.04 (4) (c)) that the proposed vegetation management program will result in less impact to the wetlands than mechanical control, the wetland no herbicide treatment zone and the surrounding limited herbicide treatment zone will be modified accordingly.

B. References and Sources for Identifying Sensitive Areas

The following references and sources identify the location of public ground water supplies, public surface water supplies, private drinking water supplies marked in accordance with 333 CMR 11.04 (2) (c) (3) and the general location of wetlands. Standing and flowing water, and agricultural and habitated areas are readily identified in the field.

1. Massachusetts Department of Environmental Quality Engineering (DEQE) Watershed Maps (scale 1:25,000); delineates the perimeter of public watersheds and the location of public wells
2. Massachusetts DEQE Wetlands Restriction Maps (scales usually 1:1,000); approximately 15% of the state has been mapped; available from DEQE, Division of Wetlands and Waterways
3. Municipal Maps and Records (scales vary); provides location of private drinking water supplies marked in accordance with 333 CMR 11.04 (2) (c) (3)
4. Regional Planning Agencies' 208 Water Quality Survey wetlands maps (scales vary): not all planning agencies have copies
5. US Army Corps of Engineers (COE) wetlands maps (scales vary); prepared for specific COE projects
6. US Fish & Wildlife Service National Wetlands Inventory Maps (scales of 1:24,000 and 1:25,000); available from the University of Massachusetts at Amherst, Cartographic Information Research Services
7. US Geological Survey Topographic Maps (scale 1:25,000); identifies major wetland areas
8. US Soil Conservation Service Maps (scales vary); available for most communities; note muck and peat soils
9. William McConnell Land Use Maps (scale 1:25,000); delineates wetlands using aerial photos; available from the University of Massachusetts at Amherst, Department of Forestry and Wildlife Management, (caution: some forested swamps not included in wetland classification)

C. Method for Identifying Sensitive Areas

The following procedure will be used to identify local distribution line sensitive areas:

1. The appropriate references and sources will be consulted to determine the location of public and private water supplies. Private drinking water supplies must be marked by the property owner in accordance with 333 CMR 11.04 (2) (c) (3).
2. These public and private water supplies will be designated on YOP maps.

3. Prior to application, the location of these public and private water supplies will be identified in the field by a "point person" in advance of the treating crew.
4. Appropriate distances will be measured from these public and private water supplies to identify no herbicide treatment zones. Limited herbicide treatment zones do not require identification along local distribution lines since the minimum time intervals between applications is not exceeded, and the cut stump technique is the only method of application in accordance with 333 CMR 11.04.
5. Standing and flowing surface waters, wetlands, and agricultural and habituated areas will be identified in the field.

D. Control Strategies Proposed for Sensitive Areas

The Company's policy requires compliance with all applicable federal and State laws and regulations. The following vegetation control strategies proposed for sensitive areas are consistent with the same.

1. Herbicides will be used in accordance with this Vegetation Management Plan and the Yearly Operational Plan. These documents will be carried at all times with the applicator.
2. Herbicide treatment is made only by applicators who are appropriately certified by the DFA or appropriately licensed by the DFA and working under the on-site supervision of an appropriately certified applicator.
3. A minimum of 24 months will elapse between herbicide applications in limited herbicide treatment zones of public ground water supplies, public surface water supplies, and private drinking water supplies.
4. A minimum of 12 months will elapse between herbicide applications in limited herbicide treatment zones of surface waters, wetlands, and habituated and agricultural areas.
5. No more than the minimum labelled rate of herbicide appropriate to the site, pest, and application method will be applied in sensitive areas.
6. Herbicides recommended for sensitive areas and guidelines for their use will be followed as provided by 333 CMR 11.04 (1)(d).
7. All other limitations placed on sensitive areas will be followed as provided by 333 CMR 11.04.

OPERATIONAL GUIDELINES FOR APPLICATORS

The Company's policy requires contracted applicators to comply with all applicable federal and state laws and regulations or approved standards and safety practices. The U. S. Government, primarily through the EPA, has established standards for pesticide use and handling. Within Massachusetts, the DFA governs the use of pesticides. No application may be made within State boundaries "in violation of any statutes, rules, or regulations of the Commonwealth, including but not limited to, regulations promulgated by the Department of Environmental Quality Engineering, the Department of Fisheries, Wildlife and Recreational Vehicles, and the Department of Public Works."

In addition, Massachusetts Pesticide Regulation 333 CMR 10.03 (9) states "No person shall distribute, handle, dispose of, discard or store any pesticide or pesticide container in a manner as to cause or which is likely to cause injury, as determined by the Department [of Food and Agriculture], to humans, vegetation, crops, livestock, wildlife, or beneficial insects, to cause damage to the environment or to pollute any water supply, waterway, groundwater, or waterbody."

The product label is the permit under which the product can be marketed. The label is periodically updated and provides the most current information which is essential to the safe handling and application of the product. "Use inconsistent with the labeling" is punishable by fines and/or imprisonment.

This section provides a partial summary of operational guidelines as specified by federal and state training manuals, laws, and regulations applicable to local distribution line herbicide applicators. The best guideline in applying herbicides is for applicators to use their own awareness, good judgement and common sense.

A. Safety Precautions

The following general safety precautions should be taken when handling and using herbicides:

1. Transporting Herbicides

- a. Do not carry herbicides in the driving compartment of your vehicle.
- b. Containers should be placed and secured so they do not tip over or bounce around, preferably in an enclosed compartment.
- c. Do not transport food, feed, or people near herbicides.
- d. Department of Transportation regulations and appropriate state and local laws and regulations must be followed when transporting herbicides across state lines.

2. Protective Clothing

- a. Some herbicides require no protective clothing but common sense should be followed.
- b. Follow label precautions.
- c. Wear protective spray clothes including a closely woven long-sleeved shirt, pants, or coveralls, shoes, and socks.

3. Exposure

- a. Do not work in spray, drift, or run off unless thoroughly protected.
- b. Wash thoroughly before eating, drinking, or smoking.
- c. Work in pairs to help identify poison symptoms.
- d. Keep unauthorized people and animals out of the treatment area.
- e. Use proper application rates.

4. Personal Hygiene

- a. Immediately wash off any herbicide spilled on the body.
- b. Change spray clothes daily.
- c. Keep spray clothes separate from other clothing.
- d. Wash spray clothes thoroughly.
- e. Take a shower at the end of each day.

5. Herbicide Poisoning

- a. Keep herbicides out of the reach of children.
- b. Inform your doctor which herbicide you use.
- c. A well-equipped first aid kit should be available at the work site in case of emergency.
- d. If poisoned, call an ambulance or Massachusetts Poison Information Center and administer proper first aid.

B. Filling and Mixing

Applicators are most often exposed to harmful levels of pesticides during filling and mixing operations. Although herbicides used for local distribution vegetation control are not generally mixed, they may be transferred from one container to another. The following steps should be taken to avoid accidental exposure to the applicator or harm to the environment.

1. Follow all label directions.
2. Keep animals and unauthorized people out of the filling area.
3. Herbicide concentrates may not be handled, mixed, or loaded within 100 feet of a sensitive area.
4. Wear protective clothes, rubber gloves, hat, respirator, and goggles or face shield as specified on the label.
5. Change clothes immediately if concentrates are splashed or spilled on clothing.

6. Keep plenty of soap and water at your disposal for cleanup.
7. When pouring herbicides, keep your head well above the opening and position yourself so winds do not carry the pesticide into your face or body.
8. Do not allow the sprayer to run over when filling.
9. Triple rinse empty containers and utilize the rinsings whenever possible.

C. Designation of Approved Herbicide Mixture

Designation of herbicide (including manufacturer and brand name), carrier and mixture to be used is provided by The Company before the work is started.

D. Equipment Calibration

Unlike certain broadcast methods of application, the cut stump technique does not require specific equipment calibration. Hand-operated spray bottles, paint brushes, and portable sprayers are the only types of equipment used to apply herbicides along The Company's local distribution lines. The rate of delivery for the cut stump technique is based primarily on the proper coverage of the cut stump surface, especially the cambium layer next to the bark. Proper rates of application do, however, depend upon the following parameters:

1. Proper distance between the sprayer and target plant.
2. Proper pump pressure.
3. Correct nozzle type and opening size.

Equipment should be kept in good working order. Leaking or faulty pumps, tanks, hoses, nozzles, and fittings should be repaired at once.

E. Weather

Applicators must give weather factors due consideration in their decision to conduct spray operations on any given day or to continue when weather conditions become unsuitable. Rain water not only washes herbicides from stumps and reduces its effectiveness, but the resulting runoff could pose harm to the environment. High wind speeds increase the chances for drift to non-target plants, sensitive areas and the applicator. For these reasons, "No herbicide is applied when the wind velocity is such that there is a high propensity to drift off target and/or during measurable precipitation."

F. Disposal

Surplus herbicides and empty herbicide containers should be disposed of as described in Pesticide Fact Sheets furnished in the YOP. Disposal must also comply with federal, state, and local laws, regulations and orders. Applicators that accumulate 2.2 lbs./month of acutely toxic materials or 44 lbs./month of toxic materials or 22 lbs./month of unrinsable containers must register as a generator. Acutely toxic materials and toxic materials are listed in the Massachusetts Core Manual Supplement. Generators of hazardous wastes must hire a licensed transporter to take the wastes to approved storage and disposal sites.

To cut down on herbicide surplus, the following measures should be taken:

1. Make sure the herbicide is fully registered and effective against the pest before buying it.
2. Purchase no more herbicide than needed.

G. Record Keeping

The Occupational Safety and Health Act (OSHA) of 1970 requires employers of eleven or more employees to maintain records and prepare periodic reports concerning work related deaths, injuries, and illnesses. In the Commonwealth of Massachusetts, record keeping is required of all certified commercial applicators and licensed applicators. Operational records must contain the following information (as specified in 333 CMR 10.16):

1. Place of application
2. Date of application
3. The brand or registered name of the pesticide
4. The EPA registration number of the pesticide
5. The amount of pesticide applied
6. The purpose for which the pesticide was applied
7. Method of application
8. The persons certified or licensed by the Department of Food and Agriculture who participated in the planning and execution of the application
9. Accidents or incidents resulting from use of a pesticide which caused pollution
10. The amount of liability insurance carried and the name of the insurer
11. Any illnesses or injuries caused by or suspected to have been caused by pesticides and reported to the applicator.

INTEGRATED PEST MANAGEMENT PROGRAM

Integrated pest management (IPM) operates on the principle that pests are best controlled through an interdisciplinary combination of chemical and non-chemical methods. This principle is put into practice on The Company's local distribution lines through a specialized herbicide program and cutting strategies designed to achieve long term selective, cultural, and natural control at the lowest cost to the electrical customer without causing unreasonable adverse effects on the environment and public health. Data will be generated over the next five years from contractor time sheets demonstrating how this proposed control program reduces the amount and frequency of herbicide applications. The efficacy of the control methods will be monitored and good results will be maintained detailing the results of different control strategies. This section describes these integrated approaches used to minimize the use of herbicides and yet effectively control target plant populations.

A. Selective Application Technique

The cut stump technique is used to apply a dilute herbicide mixture directly to sproutable cut-off stumps of target vegetation with precision. Small amounts of herbicide are used as the chemical is applied only to the residual stump after cutting. Conifer tree stumps (except pitch pine), are not treated since they are incapable of sprouting. Applicators use spray bottles, paint brushes, and low pressure sprayers which virtually eliminate the chances for non-target injury.

B. Selective Herbicides

A variety of selective herbicides are available which affect certain groups of plants with little or no affect on others. Some herbicides control broad-leaved tree species while not affecting certain low-growing shrubs, grasses, and herbaceous plants. Other herbicides control broadleafed tree species but do not affect desirable grass species such as lawns or grain crops.

C. Long-Term Timing of Treatment

Proper timing of selective herbicide applications is important to the long-term planning of electric utility vegetation management. To insure reliability, vegetation maintenance is scheduled to preclude encroachment of target vegetation into the conductors as allowed by current funding levels.

With approximately 3,514 pole miles of local distribution lines, approximately one-fourth must be maintained each year to ensure the integrity of the system. Although this relates to a normal four-year maintenance interval, fixed application schedules are avoided by on-site determinations of present site conditions. An assessment of the site is conducted to document the vegetation conditions (including the height and density of desirable and undesirable species), and other site conditions (such as environmental and visual sensitive areas) to determine if vegetation maintenance should be advanced, scheduled, or delayed.

D. Short-Term Timing of Treatment

Spray crews adhere to strict procedures governing the timing of cut stump treatments. Stump treatments are made before becoming covered with snow, ice, or debris, and before the end of the same day the stump is cut for effective control. Herbicides are not applied when the wind velocity is such that there is a high propensity to drift off target and during measurable precipitation.

E. Cutting Without Herbicide Treatment

As discussed in Section V. G. Integrated Vegetation Control, the use of herbicides is not appropriate under all conditions. Therefore, cutting operations are conducted without the use of herbicides when local distribution lines cross sensitive area no herbicide treatment zones and when weather conditions restrict herbicide application.

F. Cultural Control

Perhaps most importantly, electric utility integrated management seeks to culturally control vegetation by regulating species composition and stem density. Only tall-growing undesirable species are selected for control. Selectively removing target tree species while leaving desirable low-growing shrubs results in a higher ratio of shrubs to trees and a long-term reduction in tree stem counts. By leaving desirable shrub species, a conscious attempt is made to encourage these plants through the subsequent reduction in competition for carbon dioxide, water, nutrients, and sunlight. Concentrating growth on these plants and maintaining thrifty, vigorous growth encourages their spread along the power line.

G. Natural Control

Natural control relies on the concept that ecological principles can be used to control the natural stages of plant development. The interrelationships of nature are utilized along local distribution lines, (especially along off road lines) to establish relatively stable plant communities that tend to maintain themselves.

Creating a low-growing plant cover slows the natural progression of plant succession to a climax stage by preventing the invasion and development of undesirable tall-growing trees. Desirable shrubs are also encouraged since they tend to be sun-loving, shade intolerant plants which thrive in full sunlight. As low-growing plant communities become more dense, the number of undesirable stems will be lower and the need for constant control of target vegetation is reduced.

IX. ALTERNATIVE LAND USE PROVISIONS AND AGREEMENTS MINIMIZING THE NEED FOR HERBICIDES

This section describes the alternative land use options and agreements which minimize the need for herbicides along The Company's local distribution lines.

A. Land Use Provisions

A large portion of local distribution lines have no brush requiring control due to land usage. Cut stump treatments are not necessary where lawns, roadways, urban areas, industrial sites, and agricultural areas such as pastures, hayfields, and cornlots do not allow target species to interfere with the conductors or access.

B. Agreements

Agreements are allowed in the unusual circumstance that property owners are directly encumbered by right-of-way easements located off the public way. These property owners are allowed to maintain their right-of-way property, without the use of herbicides, if the right-of-way is maintained in a condition acceptable to The Company. Refer to Appendix B for formats of letters of agreement and easement right-of-way conditions to be met in lieu of herbicide treatment applicable to local distribution.

B. Emergency Action

If spills are noticed immediately, most of the herbicide can be removed by shoveling off about one inch of treated soil. If spills are noticed after rain, the top 4 to 6 inches of soil should be removed. Activated charcoal can be applied at the rate of seven pounds per 1,000 square feet of ground surface area and incorporated into the soil to absorb any residual herbicide and make it unavailable for plants.

1. Major Spills and Related Accidents For the purposes of this VMP, major spills involve reportable quantities of hazardous materials as defined by the Department of Environmental Quality Engineering (DEQE) 310 CMR 40.000. Related accidents include fire, poisoning, and automobile accidents.
 - a. Administer proper first aid and call an ambulance and/or Massachusetts Poison Information Center in cases involving injury or poisoning.
 - b. Call the police and/or fire department in cases involving automobile accidents or fire.
 - c. Avoid breathing fumes of burning herbicides.
 - d. Put out all sources of fire. Do not light flares, cigarettes, etc. which can ignite certain herbicides.
 - e. If possible, control the spill by stopping the leak or source of spill.
 - f. Confine the spread of liquids with a dike composed of soil or other absorptive materials.
 - g. Call ChemTrec, Massachusetts Pesticide Bureau, or chemical manufacturer for assistance if unable to handle the spill or the material is unfamiliar.
 - h. Notify the DEQE if water bodies are contaminated, and for releases or threatened releases of reportable quantities of hazardous materials or oil. Notify the appropriate municipal official as specified in the YOP.
 - i. Clean up spill.
 - 1) If the spill occurs in a public location, isolate the spill area and deny unauthorized entry until cleanup is complete.
 - 2) Absorb spilled liquids with sand, absorptive clay, spill control gel, vermiculite, pet litter, sawdust or other absorptive material. Wear proper protective clothing and equipment.
 - 3) Sweep or shovel contaminated absorbent into a leakproof, sealable container for later disposal.
 - 4) Dry herbicides, such as dusts, granulars and pellets can be directly swept or shoveled into leakproof sealable containers without absorptive materials.

- 5) Neutralize contaminated area with hydrated lime, sodium hypochlorite (bleach), or soapy water. Never mix bleach and ammonia base products or a poisonous gas will result.
 - 6) Dispose of contaminated material at an approved location.
2. Minor Spills Minor spills involve less than reportable quantities of hazardous materials.
- a. In case of contact with herbicides, wash with plenty of soap and water. Administer proper first aid and see a doctor if necessary.
 - b. Change clothing which has absorbed herbicides.
 - c. Clean up spill.
 - 1) If the spill occurs in a public location, isolate the spill area and deny unauthorized entry until cleanup is complete.
 - 2) Absorb spilled liquids with sand, absorptive clay, spill control gel, vermiculite, pet litter, sawdust, or other absorptive material. Wear proper protective clothing and equipment.
 - 3) Sweep or shovel contaminated absorbent into a leakproof, sealable container for later disposal.
 - 4) Dry herbicides, such as dusts, granulars, and pellets can be directly swept or shoveled into leakproof sealable containers without absorptive materials.
 - 5) Neutralize contaminated area with hydrated lime, sodium hypochlorite (bleach), or soapy water. Never mix bleach and ammonia base products or a poisonous gas will result.
 - 6) Dispose of contaminated material at an approved location.

APPENDIX A IDENTIFICATION AND QUALIFICATIONS OF INDIVIDUALS DEVELOPING AND SUBMITTING PLAN

The following individuals are responsible for developing and submitting this VMF.
Address responses to:

Mr. Smuts is presently section head of System Forestry in Northeast Utilities Service Co. with over 35 years experience in electric utility forestry, including herbicide use. He received a B. S. degree in General Forestry from the SUNY College of Forestry. Prior to joining Northeast Utilities Service Co. in 1971, he was Forester for the Hartford Electric Light Co. for many years. He has been involved with several utility industry studies regarding herbicides and tree growth regulators, most recently as a member of the Herbicide Working Group of the Edison Electric Institute Transmission and Distribution Committee. The Herbicide Working Group was the steering committee working with Dr. Kenneth Carvell in preparation of the report entitled "Herbicide Use On Electric Utility Rights-of-Way". He is a member of the International Society of Arboriculture, its New England Chapter and its Utility Arborist Association, and the T & D Line Clearing Practices Task Group of the Electric Council of New England.

Douglas Pistawka, Environmental Consultants, Inc.

Mr. Pistawka is a consultant to Western Massachusetts Electric Company responsible for developing this plan. In his present position with ECI, Mr. Pistawka is a Contract Coordinator with the Vegetation Maintenance Group at WMECO. Previously he was instrumental in conducting a survey and preparing a report and slide show concerning WMECO off road local distribution lines.

Mr. Pistawka holds an A.S. in Environmental Science from Genesee Community College and received a B.S. in Resources Management and M.S. in Resources Management and Policy from the SUNY College of Environmental Science and Forestry. Mr. Pistawka worked on a variety of environmental and legislative issues as an intern with the New York State Assembly in Albany. He was a Line Clearance Specialist with Asplundh Tree Expert Company in New York and previously led a Youth Conservation Corp program on the Moosehorn National Wildlife Refuge in Maine. He worked for the U.S. Forest Service on the Allegheny National Forest in Pennsylvania and the Kaibab National Forest in Arizona and was also an Environmental Instructor for a Cooperative Extension 4-H Camp in New York State. He is affiliated with the International Society of Arboriculture, Massachusetts Tree Wardens' and Foresters' Association, Massachusetts Audubon Society, Society of American Foresters, The Wildlife Society, and Society of Photogrammetry and Remote Sensing.

APPENDIX B

LETTER FORMAT TO BE SENT TO LANDOWNERS WHO OBJECT TO NU'S HERBICIDE USE AND AGREE TO KEEP CLEAR NU'S LOCAL DISTRIBUTION RIGHTS-OF-WAY EASEMENTS ON THEIR PROPERTY

Dear _____ :

This is to confirm our conversation on _____ (date) concerning woody vegetation control of trees, underbrush, or vines on your property at _____ (street address), in the town of _____, _____ (state).

Our easement on your land allows us to control woody vegetation, including the use of herbicides. However, you have agreed to cut and keep cut the target woody vegetation within the right-of-way. Target woody vegetation includes all trees and tall maturing shrubs which are capable of growing to touch and short circuit the wires as described in the enclosed "conditions page". By doing this, your preferences as well as our requirements would be met.

If the right-of-way is in a condition satisfactory to NU by _____ (date) and kept that way thereafter, it will not be necessary for us to pursue any of our normal woody vegetation control methods using herbicides. However, if the right-of-way is not in a condition satisfactory to us at any time thereafter, we will maintain the right-of-way using any method we determine appropriate as allowed by our easement rights, and in accordance with all applicable Federal and State laws and regulations.

We discourage landowners from cutting any trees, underbrush, and vines which are within six (6) feet of the local distribution electric wires at any time. If there is any question whether or not trees, underbrush, or vines are clear underneath and to the side, or overhanging the conductors, please contact:
_____ (coordinator), telephone number _____.

For your information, attached is a copy of our requirements entitled "Local Distribution Easement Right-of-Way Conditions to be Met in Lieu of Herbicide Treatment".

Sincerely,

APPENDIX B (continued)

NORTHEAST UTILITIES LOCAL DISTRIBUTION EASEMENT RIGHT-OF-WAY CONDITIONS TO BE MET IN LIEU OF HERBICIDE TREATMENT

- A. The right-of-way shall be clear at all times of live woody vegetation as follows:
1. After an access way has been clearly defined, no woody vegetation (including trees, and tall maturing shrubs) shall be present taller than 8 feet, and no woody vines shall be growing on poles or guy wires.
The only exception to this may be shrubs which mature no taller than 12 feet.
 - B. All stumps shall be cut as close to the ground as possible, and in no case shall they be cut higher than 3 inches unless used as supports for a fence. If certain trees serve as fence supports, they shall be cut no higher than two (2") inches above the fence. All stumps shall be cut-off at right angles to the stems to avoid leaving sharp points.
 - C. If cut-off brush is piled by the land owner within the limits of the cleared portion of the right-of-way, it shall be piled as near to the cleared edges as possible and outside of the outermost electric lines. Each brush pile shall be no higher than 2 feet and no larger on its greatest horizontal dimension than 16 feet, and it shall be separated from any other brush or log pile by at least 6 feet. No brush shall be piled within woods roads, paths, on guying anchors, or at any other locations designated by the Company's Regional Distribution Tree Clearance Coordinator.
 - D. The land owner shall identify with visible markings the boundaries of his property within the right-of-way.

333 CMR: PESTICIDE BOARD

APPENDIX C

333 CMR 11.00: RIGHTS OF WAY MANAGEMENT

Section

- 11.01: Purpose
- 11.02: Definitions
- 11.03: General Provisions
- 11.04: Sensitive Area Restrictions
- 11.05: Vegetation Management Plan (VMP)
- 11.06: Yearly Operational Plan (YOP)
- 11.07: Public Notification
- 11.08: Notice of Modification and Revocation
- 11.09: Right-of-Appeal
- 11.10: Penalties
- 11.11: Effective Dates
- 11.12: Further Review

11.01: Purpose

The purpose of this chapter is to promote the implementation of Integrated Pest Management (IPM) Techniques and to establish those standards, requirements and procedures necessary to minimize the risk of unreasonable adverse effects on human health and the environment associated with the use of herbicides to maintain rights-of-way and to establish a statewide and uniform regulatory process. These regulations establish procedures which guarantee ample opportunity for public and municipal agency review and input on right-of-way maintenance plans.

11.02: Definitions

For the purpose of 333 CMR 11.00, the following definitions shall apply.

Agricultural Area, shall refer to but not be limited to actively cultivated gardens, greenhouses, orchards, fields, pastures, and other areas where herbicides might impact adversely on the vegetation under cultivation or agricultural management.

Applicant, shall refer to any person representing federal, state or local governments or agencies, utilities, railroads, pipelines, that intend to maintain a right-of-way by the application of herbicide.

Ballast, shall refer to the coarse gravel or crushed rock on to which the ties, tracks, and any switching, signaling and communication devices of a railroad are laid.

Broadcast, shall refer to any non-selective herbicide application technique which results in application to all vegetation within a target area.

Department, shall refer to the Department of Food and Agriculture. Foliar Treatment, shall refer to any technique which applies herbicide to leaves of the target vegetation.

habitated Area, shall refer to, but not be limited to residences, schools, hospitals, parks and recreational facilities or other areas in which humans generally live, work or gather.

Low Pressure, shall refer to pressure under 50 psi.

Maps, shall refer to maps which are of such accuracy and scale, as determined by the Department to provide sufficient detail so that sensitive areas can be delineated, or which show bench marks or other permanent structures located on the right-of-way which allow the delineation of sensitive areas.

Person, shall refer to, but is not limited to, an individual, association, partnership, corporation, company, business organization, trust, estate, the commonwealth or its political subdivision, administrative agencies, public or

11.02: continued

quasi-public corporation or body, or any other legal entity or its legal representatives, agent or assign or a group of persons.

Person Aggrieved, shall refer to any person who, because of an act or failure to act by the Department may suffer an injury in fact which is different either in kind or magnitude from that suffered by the general public and which is within the scope of the interests identified in these Regulations. Such person must specify in writing sufficient facts to allow the Department to determine whether or not the person is in fact aggrieved.

Primary Recharge Area, that land area delineated by Zone II as defined in 310 CMR 24.06 or in such cases as the primary recharge area has not been designated it shall be, in the interim, be defined as a one half (1/2) mile radius from the public drinking water supply well unless otherwise determined by the Department of Environmental Quality Engineering.

Right(s)-of-Way (ROW), for the purpose of this regulation shall refer to any roadway, or thoroughfare on which public passage is made and any corridor of land over which facilities such as railroads, pipeline, powerline, conduit, channel or communication lines are located.

Selective Application, shall refer to the application of herbicide, in such a manner that the delivery to the target vegetation is optimized and delivery to non-target vegetation and the environment is minimized.

Sensitive areas, shall refer to any areas, within rights-of-way, including but not limited to the following, in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects:

- (a) within the primary recharge area of a public drinking water supply well
- (b) within four hundred (400) feet of any surface water used as a public water supply
- (c) within one hundred (100) feet of any appropriately marked private drinking water supply well
- (d) within one hundred (100) feet of any standing or flowing water
- (e) within one hundred (100) feet of any wetland
- (f) within one hundred (100) feet of any agricultural or habituated area

Stem treatment, shall refer to any technique including stump, basal, stem, injection, banding, flail, girdle and any other treatment which delivers herbicide at low pressure to the stump, base or stem of the target vegetation.

Target Vegetation, shall refer to any plant species which has the potential to interfere with the operation of the rights-of-way.

Touch-up application, shall refer to limited application of herbicides following an initial treatment, which is necessary to achieve the desired vegetation control.

Vegetation Management Plan (VMP), shall refer to a long term management plan for the applicants right-of-way system which describes the intended program for vegetation control over a five (5) year period.

VMP Advisory Panel, shall refer to the Vegetation Management Plan Advisory Panel as set forth in 333 CMR 11.05(4).

Yearly Operation Plan (YOP), shall refer to the yearly operational plan which describes the detailed vegetation management operation for the calendar year consistent with the terms of the long term Vegetation Management Plans.

Water Supply, shall refer to any raw or finished water source that is presently used, reserved for future use, or under investigation for future use by a public water system as defined in 310 CMR 22.02, or used as a source of private drinking water by one or more persons. This shall include all land and waters

11.02: continued

used as or tributary to a public water system except those exempted under 310 CMR 22.20.

Wetlands, with the exception of land subject to flooding shall refer to areas subject to protection under M.G.L. c. 131, s. 40 which include the following areas as defined in 310 CMR 10.02(1)(a)-(c):

- | | | |
|---|-----------|-------------|
| (a) Any bank. | bordering | the ocean |
| any freshwater wetland. | on | any estuary |
| any coastal wetland. | | any creek |
| any beach. | | any river |
| any dune. | | any stream |
| any flat. | | any pond |
| any marsh. | | or any lake |
| or any swamp. | | |
| (b) Land under any of the water bodies listed above | | |
| (c) Land subject to tidal action | | |

11.03: General Provisions

(1) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way unless appropriately certified by the Department or unless appropriately licensed by the Department and working under the on site supervision of a appropriately certified applicator.

(2) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way except in accordance a Vegetation Management Plan and Yearly Operating Plan approved by the Department. Such documents shall be carried at all times during herbicide application and shall be made available to the Department and appropriate municipal officials of the Conservation Commission and Board of Health upon a reasonable demand.

(3) No person shall handle, mix or load an herbicide concentrate on a right-of-way within one hundred (100) feet of a sensitive area.

(4) The perimeter of any sensitive areas which are not readily identifiable on the ROW shall be appropriately marked prior to any herbicide applications. The precise method used in marking these areas shall be identified in the VMP.

(5) No foliar application of herbicides shall be used to control vegetation greater than twelve (12) feet in height except for side trimming.

(6) No herbicide shall be applied when the wind velocity is such that there is a high propensity to drift off target and/or during measurable precipitation.

(7) No person shall apply herbicides by aircraft for the purpose of clearing or maintaining a right-of-way.

(8) No touch-up applications shall be carried out except under the following conditions:

- Touch-up applications must occur within twelve (12) months of the date of approval of the YOP.
- The Department, the Conservation Commission, Board of Health, and Chief elected official of the municipality shall be notified by registered mail at least twenty-one (21) days prior to any application.
- No more than ten percent (10%) of the initially identified target vegetation on the applicants right-of-way in any municipality may be treated and the total amount of herbicide applied in any one year shall not exceed the limits specified by the label or Yearly Operational Plan.
- The Department may impose such additional restrictions or conditions on the use of herbicides as it deems necessary to protect public health and the environment.

(9) Notwithstanding 333 CMR 11.03(2), until September 15, 1987, herbicides may be used for the purpose of clearing or maintaining a railroad rights-of-way

11.03: continued

without a Vegetation Management Plan or Yearly Operational Plan approved by the Department provided that:

(a) for application of herbicides within one hundred (100) feet of a wetland the applicant must obtain a certification that said application is necessary for the protection of the health and safety of the citizens of the Commonwealth and is to be performed or is directed to be performed by an agency of the Commonwealth or federal government.

(b) the application is performed in accordance with all other requirements contained in 333 CMR 11.03 and 11.04; and

(c) prior to or at the time of application of herbicides within one hundred (100) feet of a wetland, the applicant must delineate wetlands and mark the 10 foot set back from the wetland boundary, within which no application of herbicides may occur pursuant to 333 CMR 11.04(4)(a), in accordance with the following procedures:

1. the person making such delineation must submit to the DEQE a statement of qualifications demonstrating expertise in wetland boundary delineation;

2. the conservation commission in each town in which herbicides are to be applied shall be given the opportunity to accompany and observe the expert during the wetland boundary delineation;

3. notice of the date, time and location of said delineation shall be given to the conservation commission at least ten (10) days prior thereto;

4. if the wetland boundary delineation occurs prior to the application of herbicides, the delineation of the wetlands and the ten (10) foot set back must be marked in a manner that will remain visible to the person applying herbicides;

5. herbicides may only be applied within nine (9) feet of the centerline of the track; and

6. only herbicides which have been found suitable for use in sensitive areas pursuant to 333 CMR 11.04(1)(d) may be applied.

11.04: Sensitive Area Restrictions(1) General

(a) No more than the minimum labelled rate of the pesticide product for the appropriate site, pest, and application method shall be applied.

(b) Herbicides applied in sensitive areas shall be applied selectively by low pressure foliar techniques or stem application.

(c) No person shall apply herbicides for the purpose of clearing or maintaining a right-of-way in such a manner that results in drift to any area within ten (10) feet of standing or flowing water in a wetland or area within four hundred (400) feet of a public drinking water supply well; or area within one hundred (100) feet of any surface water used as a public water supply; or area within fifty (50) feet of a private drinking water supply marked in accordance with 333 CMR 11.04(2)(c)3.

(d) The Department, in cooperation with the Department of Environmental Quality Engineering, and subject to a Memorandum of Understanding will evaluate herbicides currently registered for use on rights-of-way and will distribute a list of herbicides recommended for use in sensitive areas and guidelines for their use. The Memorandum of Understanding will set forth a procedure for this evaluation based on all available data relative to environmental fate and toxicity. Such list, guidelines and procedures will be subject to review and comment by the Department of Public Health provided that such comments are provided to the Department within a reasonable time. The Department, on August 15 of the calendar year, will make available the list and guidelines to applicants and to the VMP Advisory Committee. Applicants proposing to use an herbicide which has been registered for use on rights-of-way but has not yet been evaluated pursuant to the provisions of the Memorandum of Understanding may request that such herbicides be evaluated pursuant to said provisions. For an herbicide which has been evaluated pursuant to the provisions of the Memorandum of Understanding, applicants proposing to use such herbicide in a manner inconsistent with the terms and conditions of use imposed in the guidelines may request a modification or waiver of such terms or conditions. A

11.04: continued

request for such modification or waiver shall provide a detailed rationale for use, including all relevant data including but not limited to environmental fate, efficacy and human health effects of the proposed herbicide. Such herbicides and/or uses shall be subject to the evaluation standards adopted by the Departments of Food and Agriculture and Environmental Quality Engineering in the Memorandum of Understanding.

Commentary

Applicants subject to the provisions of the Wetlands Protection Act, who wish to apply pesticides registered for use in Massachusetts to right-of-ways, may choose to apply herbicides determined to be suitable for use in sensitive areas in accordance with the provisions of the Memorandum of Understanding mentioned above or alternatively, applicants may proceed pursuant to the provisions of 310 CMR 10.00 as authorized by M.G.L. c. 131, s. 40.

(e) The Department may impose such additional restrictions or conditions on the use of herbicides within or adjacent to sensitive areas as it determines necessary to protect human health or the environment. Such changes may be proposed by a municipal agency or individual during the public comment period.

(2) Water Supplies.

(a) Public Ground Water Supplies.

1. No herbicides shall be applied within four hundred (400) feet of any public ground water supply well.
2. No herbicides shall be applied within the primary recharge area of a public ground water supply well except under the following conditions:
 - a. A minimum of twenty-four (24) months shall elapse between applications; and
 - b. Herbicides shall be applied selectively by stem application or low pressure foliar techniques.

(b) Public Surface Water Supplies.

1. No herbicide shall be applied within one hundred (100) feet of any surface water used as a public water supply.
2. No herbicide shall be applied between one hundred (100) feet and four hundred (400) feet of any water used as a public water supply except under the following conditions:
 - a. A minimum of twenty-four (24) months shall elapse between applications; and
 - b. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.

(c) Private Drinking Water Supplies.

1. No herbicide shall be applied on or within fifty (50) feet of any private drinking water supplies marked in accordance with 333 CMR 11.04(2)(c)3.
2. No herbicide shall be applied between fifty (50) feet and one hundred (100) feet of any private drinking water supply marked in accordance with 333 CMR 11.04(2)(c)3, except under the following conditions:
 - a. A minimum of twenty-four (24) months shall elapse between applications; and
 - b. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.
3. Any private drinking water supply located within one hundred (100) feet of any right-of-way, in order to be protected, must be marked by the property owner by placing a sign on the edge of the ROW perpendicular to the location of the private drinking water supply. The sign shall be blue in color with white lettering and shall be placed at least five (5) feet above the ground in plain view and shall read "Well" and state the distance and location from the well to the ROW. The location of the private drinking water supply shall be reported by the property owner to the municipal Board of Health or other appropriate official designated by the Mayor or the Board of Selectmen so that the position of these private drinking water supplies may be located on municipal map. This information shall be made available to any applicator or applicant for use in the delineation of private drinking water supplies on the maps and in the YOP.

11.04: continued

(3) Surface Waters.

- (a) No herbicide shall be applied on or within ten (10) feet of any standing or flowing surface water which is not a public water supply.
- (b) No herbicides shall be applied between ten (10) feet and one hundred (100) feet of any standing or flowing surface water which is not a public water supply except under the following conditions:
 - 1. A minimum of twelve (12) months shall elapse between applications; and
 - 2. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.

(4) Wetlands.

- (a) No herbicide shall be applied within ten (10) feet of a wetland.
- (b) No herbicide shall be applied between ten (10) feet and one hundred (100) feet of a wetland except under the following conditions:
 - 1. A minimum of twelve (12) months shall elapse between applications; and
 - 2. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.
- (c) Notwithstanding 333 CMR 11.04(4)(a), public utilities providing electric, gas, water, telephone, telegraph and other telecommunication services may apply herbicides on or within ten (10) feet of a wetland in accordance with the following conditions:
 - 1. Submission of a study, the design of which is subject to prior approval of the Department of Food and Agriculture and Environmental Quality Engineering, evaluating impacts of proposed vegetation management programs on wetlands.
 - 2. A finding by the Department, after consultation with the Advisory Committee, that the proposed vegetation management program will result in less impact to the wetland than mechanical control.
 - 3. Notwithstanding the above, no herbicides shall be applied within ten (10) feet of any standing or flowing water in a wetland.

(5) Habitated and Agricultural Areas.

- (a) No high pressure foliar herbicide applications shall be carried out within one hundred (100) feet of any habitated or agricultural area during the growing season.
- (b) No foliar herbicide shall be applied within one hundred (100) feet of any habitated or agricultural area during the growing season except under the following conditions:
 - 1. A minimum of twelve (12) months shall elapse between applications; and
 - 2. Herbicides shall be applied selectively by low pressure foliar techniques or stem application.

11.05: Vegetation Management Plan (VMP)(1) General

- (a) Unless otherwise specified by the Department, all VMP's shall be submitted by the applicant no later than September 1 prior to the calendar year of the proposed first year of maintenance. All approved VMP's shall take effect on January 1 unless otherwise specified by the Department, and shall be effective for a five (5) year period unless otherwise modified, or revoked by the Department.
- (b) The VMP shall be presented on forms approved by the Department.

(2) Requirements. The VMP shall include but not be limited to the following:

- (a) General statement of goals and objectives of the VMP.
- (b) Identification of target vegetation
- (c) Intended methods of vegetation management and rationale for use, including: vegetation control techniques, equipment proposed for use and timing of applications and other control procedures.
- (d) Justification of herbicide applications proposed.
- (e) Methods, references and sources for identifying sensitive areas and control strategies proposed for sensitive areas.

11.05: continued

- (f) Operational guidelines for applicators relative to herbicide use.
- (g) Identification and qualifications of individuals developing and submitting plan.
- (h) A description of Integrated Pest Management Programs or other techniques/programs to minimize the amount and frequency of herbicide application.
- (i) Description of alternative land use provisions or agreements that may be established with individuals, state, federal, or municipal agencies that would minimize the need for herbicides including the rationale for accepting or denying any reasonable request made by any individual municipal, state or federal agency.
- (j) Remedial plan to address, spills and related accidents.

(3) Public Notice & Comment:

- (a) Upon submittal to the Department, notice of the VMP shall be published by the applicant in the Environmental Monitor. Said notice shall include the following information:
 - 1. A list of all municipalities through which the herbicide treated ROW pass.
 - 2. A description of the intended five (5) year program.
 - 3. Procedure established by the Department for public comment review and comment.
- (b) Upon receipt of the proposed VMP the Department shall schedule and hold appropriate regional public meetings, affording all interested parties the opportunity to comment on the proposed plan.
- (c) Public Comments shall be accepted by the Department for a period of forty-five (45) days following receipt of the VMP unless extended by the Department for good cause.

(4) VMP Advisory Panel:

- (a) There shall be a VMP Advisory Panel charged with the responsibility of reviewing Vegetation Management Plans and the accompanying public comments. They shall recommend approval, denial or modification to the Department.
- (b) The panel shall consist of the Commissioner(s) or designees of the following Departments:
 - Department of Food and Agriculture, non-voting
 - Department of Environmental Quality Engineering
 - Department of Public Health
 - Department of Public Works and
 - a representative appointed by the Commissioner of DFA from each of the following groups:
 - Massachusetts Association Conservation Commissions:
 - Massachusetts Association of Health Boards:
 - University of Massachusetts/Extension Service:
 - railroads;
 - utilities;
 - applicator; and
 - environmentalist

A member shall be appointed for a term of one, two or three years. Appointed members shall serve at the discretion of the Commissioner. No member shall serve more than six (6) consecutive years. Appointed panel members shall serve without compensation and shall not be reimbursed for any expenses incurred by them in the performance of their duties. The Commissioner of the Department or designee shall serve as an ex officio non-voting member to the VMP Advisory Panel.

- (c) The Department of Food and Agriculture Representative shall chair the VMP Advisory Panel. This chairperson shall coordinate efforts of the Department and the Panel to process the VMPs.
- (d) The VMP Advisory Panel shall conduct business in accordance with the time, place and to procedures agreed upon.
- (e) The VMP Advisory Panel shall review all complete VMPs' including all written and public hearing comments. Within thirty (30) days of receipt of the above materials unless extended for good cause, the panel shall recommend to the Department in writing approval, denial or modification of each VMP.

11.05: continued

(5) Disposition of VMP.

- (a) Twelve (12) copies of VMP shall be submitted to the Department no later than September 1 unless otherwise specified by the Department prior to the calendar year of the proposed first year of maintenance.
- (b) Within thirty (30) days of receipt of the Public Comments and VMP unless extended for good cause, the VMP Advisory Panel shall review the VMPs and recommend in writing to the Department approval or denial for each VMP, if necessary, request from the applicant additional information.
- (c) Within thirty (30) days of receipt of the Advisory Panels recommendation unless extended by the Department for good cause, the Department will notify the applicant, municipal agencies, and individuals commenting in writing (including the written recommendations of the Advisory Panel) one of the following:

 - 1. Request for additional information or modification; or
 - 2. Denial of the VMP; or
 - 3. Approval of the VMP

- (d) The VMP may be modified, withdrawn or amended by the applicant through a written request sent by certified mail to the Department.
- (e) Resubmission of a denied VMP, updating of a VMP, or a significant amendment to an approved VMP shall be processed according to 333 CMR 11.05.

(6) Time for Action. Non action on a Vegetation Management Plan within time specified herein does not constitute approval of the submitted plan. In the event that the Department fails to notify the applicant of a decision within the time specified above and upon written request from the applicant, the Commissioner must issue a finding within ten (10) days of receipt stating the reason for the delay and providing an estimated completion date.

11.06: Yeariv Operational Plan (YOP)

(1) General.

- (a) The applicant is responsible for the accuracy and completeness of all information submitted with the YOP. The YOP shall be consistent with the objectives of the VMP and shall describe the intended operational program for that calendar year.
- (b) The YOP shall be presented on forms approved by the Department.

(2) Requirements. The YOP shall include but not be limited to the following:

- (a) Maps locating the ROW and Sensitive areas not readily identifiable in the field.
- (b) Herbicides proposed including application rates, carriers, adjuvants.
- (c) Herbicide application techniques and alternative control procedures proposed.
- (d) The company which will perform any herbicide treatment.
- (e) Identification of target vegetation.
- (f) Individual representing applicant supervising YOP.
- (g) Flagging methods to designate sensitive areas on the ROW
- (h) Herbicide Fact Sheets as approved by the Department.
- (i) Procedures and locations for handling, mixing and loading of herbicide concentrates.

(3) Public Notice & Comment. Upon submittal to the Department, notice of the YOP shall be published by the applicant in the Environmental Monitor. Said notice shall include the following information:

- (a) A list of all municipalities through which the herbicide treated ROW pass.
- (b) A description of the intended program including estimated start of application and identification and location of the right-of-way.
- (c) Procedure established by the Department for public review and comment.

(4) Disposition of Plan.

- (a) The YOP shall be submitted by the applicant to the Department at least ninety (90) days prior to the proposed commencement of application.

11.06: continued

- (b) The Department shall review the YOP to ensure that the YOP is consistent with the approved VMP. Any inconsistencies or deficiencies will be noted by the Department and returned to the applicant.
- (c) Where practical, the Department shall approve or deny the YOP within ninety (90) days of receipt. The Department will provide notice of the decision to the applicant, municipal agencies and commentors in writing.
- (d) The approved YOP in conjunction with the VMP shall govern the application of herbicide for a period not to exceed twelve (12) months in accordance with other laws and regulations of the State and Federal government and impose such conditions as necessary to minimize the risk of adverse effects on human health and the environment.
- (5) Time for Action. Non action on a Yearly Operational Plan within time specified herein does not constitute constructive approval of the submitted plan. In the event that the Department fails to notify the applicant of a decision within the time specified above and upon a written request from the applicant the commissioner must issue a finding within ten (10) days of receipt stating the reason for the delay and providing an estimated completion date.

11.07: Public Notification

The applicant shall provide notice by registered mail, at least twenty-one (21) days in advance of the application of herbicide to the right-of-way to the Mayor, City Manager or Chairman of the Board of Selectman, Board of Health, Conservation Commission in the municipality where the right-of-way lies. The notice shall include but not be limited to an approved copy of the YOP; the approximate dates on which such spraying shall commence and conclude, provided however, that said spraying shall not conclude more than ten (10) days after said approximate date; a copy of a DFA approved Herbicide Fact Sheet on the active ingredient(s) of the herbicide(s) used; the name and address of contractor who will make the application or the name of the certified employee who will make the application. A copy of this notification shall be sent by the applicant to the DFA Pesticide Bureau.

11.08: Notice of Modification and Revocation

(1) The Department may suspend approval of any VMP or YOP, by written notice to the applicant and applicator, halting the application of herbicide to that right-of-way of the above mentioned YOP. After twenty-one (21) days if the applicant does not request a hearing, the Department may revoke or modify the VMP and YOP, if it finds:

- (a) that the terms, conditions of restrictions thereof, are being violated or are inadequate to avoid unreasonable adverse affects on the environment or on human health; or
- (b) that the applicant has made a false or misleading statement in the VMP or YOP; or
- (c) that the applicant has violated any provision of the Massachusetts Pesticide Control Act or FIFRA, or any regulations, standards, orders or license issued under either.

(2) Upon notice of revocation or modification, the applicant may modify the YOP by written request to the Department. Applications to modify the YOP shall be submitted in a manner set forth in 333 CMR 11.06 and disposed of in the manner set forth in 333 CMR 11.06. The Department may waive all or part of the requirement if it determines that the proposed changes do not significantly change the terms of the approved YOP.

11.09: Rights of Appeal

Any person aggrieved by the decision of the Department to approve, deny, modify or revoke an Vegetation Management Plan or Yearly Operational Plan may request an adjudicatory hearing. The request for a hearing must be sent to the Department by Certified mail or hand delivered within twenty-one (21) days after the date of decision or notice by the Department. At the same time the

11.09: continued

request for a hearing must be sent by Certified mail or hand delivered to the applicant and the Pesticide Board. The request should state clearly and concisely the facts of the proceeding, the reasons the decision is alleged to be inconsistent with 333 CMR 11.00 and the relief sought by the adjudicatory hearing. The adjudicatory hearing before the Pesticide Board shall be conducted as set forth in M.G.L. c. 30A and M.G.L. c. 132B, s. 13.

11.10: Penalties

Any person who violates any provision of 333 CMR 11.00 shall be subject to the criminal and civil penalties set forth in M.G.L. c. 132B, s. 14.

11.11: Effective Dates

For implementation of these regulations, applicants shall be subject to the following schedule of effective dates:

- (a) January 1, 1988 for applicants proposing to maintain railroad rights-of-way by the application of herbicides.
- (b) Notwithstanding 333 CMR 11.11(a), upon filing with the Secretary of the Commonwealth for application of herbicides pursuant to 333 CMR 11.03(9).
- (c) January 1, 1989 for applicants proposing to maintain electric utility, pipeline, powerline, conduit, channel or communication line right-of-way by application of herbicides.
- (d) January 1, 1990 for applicants proposing to maintain a roadway right-of-way by the application of herbicides.

11.12: Further Review

These regulations will expire and become void twenty-four (24) months after the date of promulgation unless reapproved by the Board.

REGULATORY AUTHORITY

333 CMR 11.00: M.G.L. c. 132B.

3346 027

ACME
BOOKBINDING CO., INC.

MAR 28 1991

100 CAMBRIDGE STREET
CHARLESTOWN, MASS

