

Massachusetts  
Yearly Operational Plan  
2019

Unitil Corporation  
Fitchburg Gas and Electric Light Company  
357 Electric Ave  
Lunenburg, MA 01462-2246



June 2019

## **TABLE OF CONTENTS**

Summary	1
1: Introduction	
2: Location of Proposed Herbicide Treatments	
3: Integrated Vegetation Management, Including Alternative Control Methods	
4: Identification of Target Vegetation	
5: Sensitive Areas	
6: Description of Maps Locating the Rights-of-Way	
7: Proposed Herbicides, Carriers, Adjuvants and Rates	
8: Procedures and Locations for Handling, Mixing and Loading Herbicide Concentrates	
9: Individuals Supervising the YOP	
10: Contractor that will Perform Herbicide Applications	
11: Remedial Spill and Emergency Plan	

## **APPENDICES**

Appendix 1: YOP Maps
Appendix 2: 333 CMR 11.00
Appendix 3: Sensitive Area Illustration
Appendix 4: Herbicide Labels
Appendix 5: Herbicide Fact Sheets

## Summary

The purpose of this Yearly Operational Plan (hereafter referred to as “YOP”) is to outline the Fitchburg Gas and Electric Light Company<sup>1</sup> (hereafter referred to as FG&E or the Company) 2019 program for managing vegetation with herbicides on the rights-of-way. This program and YOP have been developed in compliance with 333 CMR 11.00, rights-of-way management regulations administered by the Massachusetts Department of Agricultural Resources (DAR).

In compliance with 333 CMR 11.06 and 11.07 and Chapter 85 of the Acts of 2000, the YOP notification process provides for a forty-five day public review and comment period which starts when the Department of Agricultural Resources (DAR) publishes a notice in the Environmental Monitor, a twenty-one day review period for the municipal notification letter (may run simultaneously), and a 48 hour newspaper notice. These review periods give communities an opportunity to provide information that help identify additional areas that may require specific precautions or protection.

Under the supervision of the FG&E System Arborist and staff, herbicide applications are made in the context of an Integrated Vegetation Management (IVM) program that also utilizes mechanical and biological controls and takes into consideration the cultural use of the landscape. This IVM program is outlined in our Five-Year Vegetation Management Plan (VMP), copies of which are available upon request or at:

<http://www.unitil.com/energy-for-residents/electric-information/vegetation-management/managing-herbicides>

FG&E retains independent, experienced contractors to perform the treatment applications. Herbicides are only applied by trained, licensed applicators using hand-held equipment under the direct supervision of certified supervisors.

Any questions or comments on this YOP should be directed to the contact person listed in Section 9 of this YOP.

## 1: Introduction

In compliance with 333 CMR 11.00. Rights-of-Way Management, FG&E's YOP outlines our 2019 vegetation management program on specified (see Section 2) electric transmission rights-of-way. This YOP is consistent with the terms and procedures set forth in FG&E's 2019-2023 Vegetation Management Plan (VMP); with all pertinent clauses in Chapter 85 of the Acts of 2000; with the Massachusetts Endangered Species Act (MESA; M.G.L. chapter 131A) and its regulations, 321 CMR 10.00; and the Massachusetts Wetland Protection Act (M.G.L. chapter 132A) and its regulations, 310 CMR 10.00 of the Massachusetts Department of Environmental Protection; and with all state and federal laws and regulations that apply to right-of-way vegetation management in the Commonwealth of Massachusetts.

The purpose of 333 CMR 11.00 is to establish a statewide and uniform regulatory process which will minimize the uses of, and potential impacts from, herbicides in the rights-of-way on human health and the environment while allowing for the benefits to public safety provided by the selective use of herbicides (333 CMR 11.01).

333 CMR 11.00 (see Appendix 2) is the most comprehensive rights-of-way regulation in New England. It requires an Integrated Pest Management (in this case IVM) approach to right-of-way vegetation management; the establishment of standards and procedures to prevent unreasonable risks to humans and the environment; and a multi-layered system of public and municipal notification that requests input about environmentally and culturally sensitive areas. All of this is outlined in FG&E's VMP and annual YOP's, the vehicles for establishing and implementing IVM programs, which serve as guides for the public, state and municipal officials, vegetation management contract personnel and FG&E.

FG&E manages approximately 350 acres and 30 miles of cross-country transmission rights-of-way and 410 miles of distribution right-of-way, located primarily along roads, through the municipalities of Ashby, Fitchburg, Lunenburg and Townsend. The work is carried out over a five year maintenance cycle.

The cross-country rights-of-way traverse uplands and lowlands typical of central Massachusetts. They traverse wetlands and uplands in three municipalities: Fitchburg, Lunenburg and Townsend. These municipalities are primarily rural and suburban, though portions of Fitchburg are urban. In all locations, the rights-of-way must be kept clear of vegetation that may interfere with the safe, reliable delivery of electric service. To achieve this goal, FG&E utilizes the IVM program described in the VMP and summarized in Section 3 below.

## 2: Location of Proposed Herbicide Treatments

In 2019 FG&E will carry-out IVM work on two sub-transmission line rights-of-way, in Table 1 below; the 10 Line in Townsend from Townsend Substation #15 to West Townsend Substation #39, and the 09 line beginning in Townsend from West Townsend Substation #39 to the 08 Line Junction in Lunenburg. 7.6 miles, approximately 84 acres will be treated.

### *a. Integrated Vegetation Management Herbicide Treatments*

**Table 1:** Rights-of-Way for 2019 treatments

Fitchburg Gas and Electric Light Company				
Right-of-Way Segments				
Line Number	Voltage	Description	Miles	Acres
10	69 kV	Townsend Substation #15 to West Townsend Substation #39	3.5	40
09	69 kV	West Townsend Substation #39 to 08 Line Junction, Lunenburg	4.3	44
<b>Total:</b>			<b>7.8</b>	<b>84</b>

### *b. Tree Growth Regulator and Vine Control*

Tree growth regulators (TGR's) can lengthen the time frame between maintenance pruning cycles and improve aesthetics of street and yard trees that may otherwise require removal or severe pruning. Vine control treatments will be done on poles and equipment where they interfere with operations and access. FG&E plans on conducting TGR treatment and vine control where necessary. Treatment will take place in conjunction with pruning work in Fitchburg and Lunenburg.

### 3: Integrated Vegetation Management, Including Alternative Control Methods

The Company proposes to use all appropriate IVM methods available including: mechanical, chemical, and biological control methods. Mechanical and chemical control methods facilitate development of a low-growing plant community that in time will become the biological control over the plant community.

The primary mechanical methods will be hand cutting with chainsaws, pruning and mowing. Chemical methods involve the use of herbicides applied in several ways including cut-stump treatment and low-volume foliar treatment. All methods except mowing are applied selectively.

The rate of tree height growth and density of incompatible vegetation will determine the length of the maintenance cycle. In central Massachusetts, other utilities typically employ a five-year maintenance cycle. Timing will likely vary from four to five years depending on results of inspections of re-growth rates of vegetation and density of vegetation.

Historically the Company has only used mechanical methods (mowing and hand cutting). Exclusive use of mechanical methods has resulted in right-of-way plant communities dominated by hardwood tree species. Hardwood tree species are fast growing and incompatible with electric utility facilities. Conversion to low-growing shrub, grass and forb plant communities will require multiple cycles of mechanical and chemical treatments. Gradually, the right-of-way plant community will convert to low-growing species, requiring less mechanical and chemical treatment as the low-growing plant community exerts biological control.

While the range of IVM cycle length is likely to be four to five years, the Company will be flexible and avoid fixed schedules. Timing of vegetation maintenance will be based on inspections of rights-of-way. Inspections will include evaluation of incompatible vegetation height and density, compatible species composition, site access and topography. Maintenance of the electric facility may also impact timing of vegetation management work.

The advantage of a flexible IVM program is the ability to apply the appropriate mechanical and chemical methods to meet the conditions of individual rights-of-way. As the sole means to control vegetation, mechanical controls are a short-term solution. With the exception of most conifer species, cut vegetation re-sprouts, resulting in high density in-compatible vegetation. Selective herbicide application methods effectively remove this vegetation that would otherwise compete with and dominate the low-growing, early successional plant communities that provide biological control.

Mechanical methods are the preferred method for non-sprouting conifer species as well as in areas where use of herbicides is precluded, such as the no-spray areas associated with Sensitive Areas; in visual screens, around structures, on access roads; and where large areas of high

density in-compatible species exceed maximum herbicide treatment heights (12 feet). Mechanical methods are applied in combination with chemical methods for hardwoods over 12 feet tall – they are hand cut and stumps treated with herbicide.

## Mechanical Methods:

### Hand Cutting

Hand cutting is the mechanical cutting of vegetation using chain saws, brush saws, loppers or hand pruners. Hand cutting may be conducted at any time of the year. Target species are cut as close to the ground as practical. Slash from the cutting is cut and scattered so as to lay close to the ground – not to exceed two feet in height.

Hand cutting is used to protect environmental Sensitive Areas; around structures, gates and access roads; to control vegetation greater than 12 feet in height; where herbicide use is prohibited by regulation or easement restriction; on non-sprouting conifer species; and on sites where terrain, site sensitivity or site size makes mowing impractical.

### Mowing

Mowing is the mechanical cutting of vegetation using large tree/brush mowers mounted on rubber tired tractors or tracked vehicles.

Mowing may be used at any time of the year except when deep snow prevents safe operation. Selection of specific equipment is based on terrain, vegetation size and equipment availability. Mowing is restricted by steep slopes, rocky terrain, obstructions, wet sites with deep soft soils and debris on the right-of-way.

Mowing is used on sites where herbicide use is prohibited by regulatory or easement restriction, where vegetation is tall and high density, and where terrain, site size and sensitivity permit the efficient use of the equipment.

### Selective Pruning

Selective pruning is the mechanical removal of the tops or limbs of trees to prevent them from growing in to or falling on to the lines.

Selective pruning may be done at any time of the year. Pruning will be accomplished from the ground, using aerial lifts or by tree climbing crews.

This method is used in maintaining trees in visual screens adjacent to yards or roads and along the edges of rights-of-way to prune off-right-of-way trees.

Slash is the woody debris generated from pruning and cutting operations. Slash will be disposed of by dicing and cutting low to the ground, chipping, piling or removing from the site at the discretion of the Company. The preferred method of disposal is to dice and cut low to the ground and leave on the right-of-way to decay naturally.

Slash will not be left in waterways, trails or roads, or in such a manner that would permit it to wash into these areas. The placement of slash must comply with applicable State Fire Marshall regulations. Slash from yards or recreational sites will be chipped or removed to an adjacent area or removed. Chipping is used when dicing and cutting low to the ground are prohibited or impractical. Chips will be removed in highly sensitive sites. When left on site, wood chips will be scattered uniformly over the site at depths not exceeding three inches or piled on isolated areas. No chips will be left in wetlands.

### Chemical Methods

Herbicide applications include cut stump and low volume foliar. Herbicides are applied as mixtures consisting of the herbicide formulation(s), adjuvants, carriers and additives. Herbicide materials and mix rates are detailed in Section 7 of this YOP and associated notices to municipal officials and newspaper notices. The Company will only use herbicides and mixes consistent with the *Sensitive Area Materials List* published by the Massachusetts Department of Agricultural Resources (DAR). The Company System Arborist will further specify to the contractor, the particular materials and mixture rates for individual rights-of-way according to conditions and timing of the treatments. Treatment crews will not deviate from the Company's specification without the approval of the System Arborist.

Each herbicide has varying degrees of efficacy on vegetation. Seasonal variations in rainfall and date of application also effect efficacy. No herbicide is equally effective on all species and certain herbicides are more effective on some species than others. The Company selects the herbicide or combination of herbicides in conjunction with the appropriate treatment method to obtain the most effective control of the in-compatible vegetation and density on each right-of-way.

Each herbicide and method of application has distinctive results with respect to "brownout" and timing of plant necrosis and environmental characteristics. Environmental characteristics such as rate of biodegradation and mobility in the soil are important to consider when prescribing their use. Some herbicide formulations are labeled for use in wetlands, others are not. The selection of herbicide or herbicide mixtures and the appropriate application method is made with consideration given to the visual and environmental sensitivity of a right-of-way or site within a right-of-way.

The environmental characteristics, rates of application and selectivity of the application method are critical parameters for consideration by the DAR in development of the *Sensitive Area Materials List*.

## Methods of Application:

### Selective Foliar Application

Selective foliar applications are made to fully developed leaves and stems of the incompatible vegetation. Selective foliar applications are limited to the season when leaves are fully developed, typically from June through early October.

The equipment for selective foliar applications include hand-pump backpack sprayers, motorized backpack sprayers and off-road vehicle mounted hydraulic sprayers. Applications are made as a uniform spray over the plant's entire foliage to dampen or lightly wet the vegetation, not applied to run-off. This application method minimizes the amount of herbicide applied and reduces impacts to desirable vegetation under and around the incompatible vegetation and deposition to the soil.

Selective foliar applications are used on hardwood trees and incompatible shrub species below 12 feet in height. Foliar applications are not used where landowner agreements preclude their use, within visual screens on incompatible species greater than 6 feet in height and within mechanical only sensitive areas per 333 CMR 11.04.

Foliar applications are allowed in wetland areas where no standing water is present, per the Department of Food and Agriculture Decision, dated October, 1995, concerning the wetland impact study conducted pursuant to 333 CMR 11.04(4)(c)(2), see Appendix 4.

### Low Volume Basal Application

Low volume basal treatments are the selective application of an herbicide, diluted in specially formulated oil, to wet the lower 12 to 18 inches of the stem of incompatible plants. Application is made using a hand pump backpack sprayer. The oil carrier enables the herbicide solution to penetrate the bark tissue and translocate within the plant.

Low volume basal applications are very selective, and when used in low incompatible species density, are applied at low rates of herbicide per acre. Optimum vegetation density is low, with average heights greater than 4 feet, within visual screens and in areas where a high degree of selectivity is necessary. The application method can be used any time of the year except in conditions that prevent access to the target stems such as seasonal standing water or deep snow. The optimum treatment time frame is in the dormant season when applications are easier due to the lack of foliage and the

obstruction caused by grasses and herbaceous growth. Basal applications are not ideal in high incompatible vegetation densities due to the time and cost to apply, the likelihood of missing incompatible vegetation and resulting high level of application of herbicide per acre.

Low volume basal applications are used on the same species and vegetation heights cited above for foliar applications. Basal applications have the advantage of extending the application season into the dormant season. They also have the advantage of not creating brownout of vegetation.

### Cut Stump Applications

Cut stump applications are the mechanical cutting of incompatible vegetation followed by herbicide application to the phloem and cambium tissue of the stump. The cut stump mixture is diluted in water or a non-freezing liquid carrier and is ideally applied to freshly cut stumps. Application equipment includes low-volume backpack sprayer, hand pump sprayer, hand held squirt bottles, paintbrushes and sponge applicators.

This application method is used where maximum selectivity is desirable and/or to reduce the visual impact of vegetation management work. It is commonly used to prevent re-sprouts when hand cutting vegetation in preparation for a foliar application, to apply herbicide to vegetation in sensitive sites where other methods are not possible, on all woody vegetation (except conifers) removed in visual screens except within environmentally sensitive areas where restrictions preclude herbicide use.

Cut stump applications may be used at any time of the year provided snow depth does not prevent cutting low to the ground. It is best to avoid application during the season of high sap flow, and/or moderate to heavy rain. It is not practical in moderate to heavy vegetation densities.

## 4: Identification of Target Vegetation

The primary target on an electric utility right-of-way is woody vegetation, primarily trees that are capable of interrupting the safe delivery of energy products to our customers. Other target vegetation includes: dense woody vegetation, vines, noxious, nuisance and poisonous vegetation: all vegetation that interferes with access around structures, access roads and trails, substations; and anywhere in which vegetation prevents access to the right-of-way for inspections, maintenance, repairs and emergency access to the lines.

With few exceptions, all target species will be removed or controlled during a treatment operation. Within the cleared width of the right-of-way, all tree species, except conifers less than two feet tall, will be removed or controlled.

Tree species are identified as woody plants that mature at heights exceeding fifteen feet, These trees must be removed because they are capable of growing tall enough to grow in to or fall on to the lines.

Except in no-spray sensitive areas, (see Section 5), hardwoods over 12 feet tall are hand cut and the stumps are treated with herbicides. Hardwoods less than 12 feet tall and woody species that present safety problems are treated with herbicides using either low volume foliar or cut stump application methods. As mentioned above, Pitch Pine is the only conifer species treated with herbicides.

Trees that need to be removed will be identified visually by trained treatment crews and include, but are not limited to the following:

Ash, Aspen, Beech, Birch, Cherry, Hemlock, Pine, Poplar, Maple, Oak and Willow.

All woody vegetation (trees, shrubs, vines) on or encroaching upon existing roads or pathways or immediately adjacent to line structures or equipment will be treated by mechanical or herbicide control methods. If no access along the right-of-way exists, a pathway will be created and maintained in a suitable location by treating all woody vegetation within the selected route. Woody vegetation must be treated in these areas to ensure access to and along the right-of-way and line structures for safe and efficient inspection, maintenance and repair operations.

Other plant species to be controlled include shrub and vine species and vegetation that because of heavy thorn growth or dermal toxicity may be hazardous including, but not limited to:

Alder, Bittersweet, Blackberry, Buckthorn, Bush honeysuckle, Grapevines, Greenbriar, Hawthorne, Japanese Knotweed, Multiflora Rose, Poison Ivy, Poison Sumac, Viburnums, Virginia Creeper and Winterberry.

Not all vegetation on the right-of-way are considered targets, in fact, most species are not targets. Desirable plant species that provide the natural controls in our IVM program include, but are not limited to:

Azaleas, Button bush, Chokeberry, Common Juniper, Dogwoods, High and Low Bush Blueberries, Huckleberry, Mountain Holly, Mountain Laurel, Privet, Rhododendron, Sedges, Shadbush, Sheep Laurel, Spirea, Sumac, Sweet Fern, Sweet Pepperbush, Viburnums, Ferns, Grasses, and Herbaceous species.

## 5: Sensitive Areas

For the purposes of this YOP Sensitive Areas regulated by 333 CMR 11.04 are as follows:

Any areas within rights-of-way, including No-Spray and Limited Spray Areas, in which public health, environmental or agricultural concerns warrant special protection to further minimize the risks of unreasonable adverse effects. AN illustration of sensitive areas and their associated no-spray and limited spray areas is included in Appendix 3 of this YOP.

Sensitive Areas include the following:

### Water Supplies

- Zone I
- Zone II
- IWPA (Interim Wellhead Protection Area)
- Class A Surface Water Sources
- Tributaries to a Class A Surface Water Source
- Class B Drinking Water Intakes
- Private Wells

### Surface Waters

- Wetlands
- Open Water Bodies
- Rivers
- The Mean Annual High Water Line of a River
- The Outer Boundary of a Riverfront Area
- Certified Vernal Pools

### Cultural Sites

- Agricultural Areas
- Inhabited Areas

### Wildlife Areas:

- Certified Vernal Pool Habitat
- Priority Habitat

Protecting these environmentally sensitive sites is accomplished by defining specific sensitive areas and establishing limited spray and no-spray areas and treatment restrictions within these

areas based on the sensitivity of each site and the requirement to minimize any unreasonable adverse impacts within that area.

These sensitive areas consist of no-spray areas in which herbicides use is prohibited, larger limited spray areas where herbicide use is permitted under certain conditions, general limited spray areas and areas that require special treatment recommendations.

For the purpose of identification, sensitive areas are separated into those readily identifiable in the field and not readily identifiable in the field:

1. Sensitive area readily identifiable in the field will be treated and marked according to all applicable restrictions listed in 333 CMR 11.00 and FG&E's VMP. These areas include but are not limited to rivers and streams, surface waters, wetlands, inhabited areas, agricultural areas and road buffers.
2. Sensitive areas not readily identifiable in the field are identified by the use of the data on Company maps and additional data collected in the YOP and notification processes before the time of treatment. These areas include, but are not limited to public ground water supplies, public surface water supplies and tributaries and private wells, Priority Habitats, certified vernal pools, landowner agreement areas and easement restrictions.

Sensitive areas will be identified using many resources from the following list:

1. FG&E right-of-way maps, records and institutional knowledge,
2. Massachusetts Department of Environmental Protection water supply maps and/or GIS mapping layers available through Mass GIS,
3. DAR, Municipal Board of Health maps and lists, and FG&E records of identified private wells along the right-of-way,
4. Correspondence, meetings and input from municipalities within the forty-five day YOP and twenty-one day municipal right-of-way notification letter review and comment periods and the 48 hour newspaper notification (under 333 CMR 11.06 & 11.07 and Chapter 85 of the Acts of 2000),
5. Correspondence and meetings resulting from FG&E's abutter notification procedure,
6. A crew point person who verifies identified sensitive areas and any additional areas that may require special precautions,
7. USGS topographic maps,
8. Information from the contractor's knowledge and records,
9. Information from MassGIS,
10. Confidential information from NHESP, and copy of the YOP and VMP.

As appropriate, sensitive areas will be identified and marked in the field by either FG&E personnel, trained and experienced vegetation management contract personnel and or by individuals trained in the identification of sensitive areas.

#### Priority Habitat of State-Listed Species

In compliance with 321 CMR 10.18, Massachusetts Endangered Species Act Regulations, Part II Exemptions, FG&E has submitted this YOP for approval by the NHESP.

Under the approval process, details about the Priority Habitats of State-listed species that our activities might affect and management recommendations are shared with FG&E under strict confidentiality agreements. Using this data and best management practices, FG&E and contract personnel will follow the appropriate vegetation management treatment methods within these sensitive areas. To identify Priority Habitats, FG&E and vegetation management contract workers are trained to recognize Priority Habitats using paper maps and/or GIS systems. Particularly sensitive State-listed species will be reviewed and identified in the field for protection by NHESP approved biologists.

#### Treatment in Wetlands

Pursuant to 333 CMR 11.04(4) and based upon two right-of-way wetland impact studies, the Massachusetts Department of Food and Agriculture (now DAR) in consultation with the Department of Environmental Protection and the Right-of-Way Advisory Panel, made a determination that utilities may treat target plant species, except pines, selectively with herbicides in wetlands, under the guidance of an IVM program and with sensitive area approved herbicides except within ten feet of standing or flowing water.

## 6: Description of Maps Locating the Rights-of-Way

YOP maps locating the rights-of-way and sensitive areas not readily identified in the field will be prepared and are attached to this YOP in Appendix 1. These YOP maps will be sent to municipal officials per notification procedures discussed in Section 5.

These maps include the most current data available at the time of printing. To insure that applicable sensitive areas are identified on the maps, FG&E is requesting municipal verification of areas currently mapped and the identification of any additional areas not mapped.

The maps are resources and a tool for the public and vegetation management contractors, therefore, they contain data needed to identify, mark and treat sensitive areas appropriately at the time of treatment. Additional sensitive area information that is collected will be added to the information utilized by FG&E's vegetation management contractors. Please note that Zone II's are included on the maps, however, FG&E only uses herbicides approved for use within this limited spray sensitive area.

## 7: Proposed Herbicides, Carriers, Adjuvants and Rates

The following table shows the proposed herbicides, tank mixes, application methods and estimated application rates for use by FG&E in 2019. FG&E proposes only two methods of application, cut-stump treatment and low-volume foliar treatment. Per discussion in this YOP and the Companies VMP, the herbicides, tank mixes, application rates and timing/frequency of application comply with the limited spray sensitive area requirements for all sensitive areas and will be applied on the full length and width of the companies' rights-of-way.

### Proposed Herbicide Mixes

Trade Name	EPA #	Active Ingredient	Mixture	Treatment	Estimated rate of product per acre
Rodeo Arsenal Powerline	62719-324 241-431	Glyphosate Imazapyr	40-50% in water 3% to 5% in water	Stump (CST)	16 – 64 oz.
Krenite S Escort XP	352-395 432-1549	Fosamine Ammonium Metsulfuron Methyl	5% - 10% 2-4 oz. per 100 gal	Selective Foliar	32 – 64 oz 0.25 - .050 oz.
Krenite S Arsenal Powerline	352-395 241-431	Fosamine Ammonium Imazapyr	5% - 10% 0.125% – 0.5%	Selective Foliar	32 – 64 oz 0.25 - .050 oz
Rodeo Arsenal Powerline	62719-324 241-431	Glyphosate Imazapyr	3% - 5% 0.125% – 0.5%	Selective Foliar	32 – 64 oz 0.25 - .050 oz
Cambistat	74779-3	Paclbutrazol	8.3%	TGR (Basal)	Per tree (see application guide)

Footnote on carriers and adjuvants: The carrier for cut stump application will be water. Carrier for foliar applications will be water. Induce or Aqua Fac or equivalent surfactant will be added to foliar tank mix. Point Blank or equivalent anti-drift agent will be added to foliar mixes as needed.

## 8: Procedures and Locations for Handling, Mixing and Loading Herbicide Concentrates

The Companies' retain independent contractors to accomplish all aspects of handling, mixing and loading herbicide concentrates. As a contractual term, contractors are required to comply with all applicable laws, regulations and rules pertaining to handling, mixing and loading herbicide concentrates.

The majority of mixing, handling and loading of herbicide concentrates is done at the contractor's place of business. If it is necessary to handle, mix or load herbicide concentrates at any other location, the contractor is required to comply with herbicide label directions and 333 CMR 11 requirements regarding set-backs from sensitive areas.

FG&E requires the following standards to be followed if handling and mixing are carried out on company property or rights-of-way:

1. No handling, mixing or loading of herbicide concentrated will be done on rights-of-way within the buffer zones adjacent to any drinking water supplies or surface water or within 100 feet of any other sensitive area.
2. No water will be pumped from open sources in the field.
3. Hoses used for water will not be used to pump or mix herbicides.

## 9: Individuals Supervising the YOP

Overall supervision for development and implementation of the YOP will be performed by:

Sara Sankowich  
System Arborist  
Fitchburg Gas and Electric Light Company  
357 Electric Ave  
Lunenburg, MA 01462-2246

The Company System Arborist is ultimately responsible for preparation, implementation of and compliance with this 2019 YOP. The System Arborist's duties include: work scheduling, prescription of herbicides and application methods, procurement of necessary permits, municipal notifications, contractor selection, provision of technical expertise and liaison between Company right-of-way easement landowners, neighbors, local and state officials and other interested parties and field supervision of vegetation management contractors.

Sara Sankowich has 18 years of experience in electric utility vegetation management, a degree in Forestry and is an International Society of Arboriculture Certified Arborist.

This YOP was drafted by Sara Sankowich in consultation with Thomas E. Sullivan from Energy Initiatives Group, LLC. Tom Sullivan has worked in the electric utility vegetation management business for over thirty years. He formerly managed the Transmission Forestry Department and VMP's and YOP's for National Grid. He has degrees in Forestry and Biology and is a Massachusetts Licensed Forester and International Society of Arboriculture Certified Arborist.

## 10: Contractor that will Perform Herbicide Applications

To be determined in mid-2019 and provided in the municipal notification letters.

## 11: Remedial Spill and Emergency Plan

This section is offered as a general procedural guide for responding to chemical spills or related accidents (related accidents include but are not limited to fire, poisoning and vehicle accidents). The Company contracts with independent, professional, certified herbicide applicators that are responsible for the containment, clean up and reporting of chemical spills or accidents. The following is, therefore, only a guide to the information sources that shall be available to the treatment crew in the event of a chemical spill or emergency situation:

### ***TYPES OF CHEMICAL SPILLS THAT REQUIRE ACTION***

Chemicals include, but are not limited to the following:

- Herbicides
- Bar and Chain Oil
- Motor & Hydraulic Oil
- Diesel Fuel
- Gasoline
- Title 3 Hazmat Materials

### ***REQUIRED SPILL RESPONSE EQUIPMENT***

As a minimum, the ROW crew should have available on the job site:

- VMP and YOP with emergency contact lists
- MSDS and product labels
- Product Fact Sheets
- Appropriate absorbent material such as “speedi dri” or “soak up”
- Shovel
- Broom
- Flagging
- Leak proof container
- Heavy-duty plastic bags

### ***PERSONAL CONTACT***

In the event of **Personal Contact** with hazardous chemicals:

- Wash affected area with plenty of soap and water
- Change clothing which has absorbed hazardous chemicals
- If necessary, contact a physician
- If necessary, contact the proper emergency services
- If necessary, follow the procedures for Major or Minor Spills as outlined below
- Avoid breathing the fumes of hazardous chemicals

**REFERENCE TABLES (INFORMATION SUBJECT TO CHANGE AS NECESSARY)**

**Table 1: Herbicide Manufacturers**

MANUFACTURER	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
BASF Corporation	800-832-4357	Arsenal
E.I. du Pont de Nemours and Company	800-441-3637	Krenite & Escort
Dow Agro Sciences	800-992-5994	Rodeo & Garlon
Rainbow Treecare Scientific Advancements	800-888-8372	Cambistat

**Table 2: State Agencies**

STATE AGENCY	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
Massachusetts Pesticide Bureau	617-626-1700	A.S.A.P (within 48 hours)
Massachusetts Department of Environmental Protection, Emergency Response Section	<u>Main Office:</u> 888-304-1133 <u>Central Region:</u> 508-792-7650	for emergencies involving reportable quantities of hazardous materials; required info: City/town, Street address, Site name (if applicable), material
Massachusetts Poison Information Centers	800-682-9211	for medical emergencies involving suspected or known pesticide poisoning symptoms

**Table 3: Emergency Services**

EMERGENCY SERVICE	TELEPHONE NUMBER
Massachusetts State Police, Central Office	617-566-4500 or 911
ChemTrec	800-424-9300

**Fitchburg Gas and Electric’s contact in the case of a spill or accident:**

The FG&E System Control telephone listed below.

**Table 4: Local Emergency Numbers**

Municipality	Emergency Services	Board of Health	Town Hall
Fitchburg	911	978-829-1870	978-829-1801

## **CLEAN-UP PROCEDURES**

Education and attention will constantly be directed at accident and spill prevention, however, the following is a guideline in the event of a spill:

**REPORTABLE SPILLS (Spills of reportable quantity of material): FOLLOW STEPS 1 – 11**

**NON-REPORTABLE SPILLS: FOLLOW STEPS 1, 2, 3, 4, 8, 9, 10 & 11 and contact the Company representative.**

**Table 5: HERBICIDE SPILL CHECK LIST**

Order	ACTION	Done (v)
1	Use any and all PPE as directed by product label or MSDS.	
2	Cordon-off spill area to unauthorized people and traffic to reduce the spread and exposure of the spill.	
3	Identify source of spill and apply corrective action, if possible stop or limit any additional amounts of spilled product.	
4	Contain spill and confine the spread by damming or diking with soil, clay or other absorbent materials.	
5	Report spills of “reportable quantity to the Massachusetts DEP and DAR: See 310 CMR 40.00	
	Massachusetts DAR, Pesticide Bureau	617-626-1700
	Massachusetts Department of Environmental Protection, Division of Hazardous Waste	<u>Main Office: 888-304-1133</u> <u>Central Region: 508-792-7650</u>
6	If the spill cannot be contained or cleaned-up properly, or if there is a threat of contamination to any bodies of water, immediately contact any of the following applicable emergency response personnel:	
	local fire, police, rescue	911
	FG&E: System Control	603-294-5102
	FG&E: Environmental Dept: Tom Murphy	603-379-3829
	FG&E: Forestry: Sara Sankowich	603-379-3833
	Chemtrec	800-424-9300
	additional emergency personnel	
	If there is a doubt as to who should be notified, contact State Police, Central Office	617-566-4500 or 911
7	Remain at the scene to provide information and assistance to responding emergency clean-up crews.	
8	Refer to the various sources of information relative to handling and clean-up of spilled product.	
9	If possible, complete the process of “soaking up” with absorbent materials.	
10	Sweep or shovel contaminated products and soil into leak proof containers for proper disposal at approved location.	
11	Spread activated charcoal over spill area to inactivate any residual herbicide.	

## Appendix 1

### YOP Maps

## Appendix 2

333 CMR 11.00

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: Rights-of-way Advisory Panel

11.01: Purpose

The purpose of 333 CMR 11.00 is to establish a statewide and uniform regulatory process which will minimize the uses of, and potential impacts from herbicides in rights-of-way on human health and the environment while allowing for the benefits to public safety provided by the selective use of herbicides. Specific goals of 333 CMR 11.00 are to:

- (1) Ensure that an Integrated Pest Management (IPM) approach to vegetation management is utilized on all rights-of-way covered by 333 CMR 11.00.
- (2) Establish standards, requirements and procedures necessary to prevent unreasonable risks to humans or the environment, taking into account the economic, social and environmental costs and benefits of the use of any pesticide.
- (3) Ensure ample opportunity for public and municipal agency input on potential impacts of herbicide application to rights-of-way in environmentally sensitive areas.
- (4) Establish a mechanism for public and municipal review of rights-of-way maintenance plans.

11.02: Definitions

For the purposes of 333 CMR 11.00, unless the context clearly requires otherwise, the following definitions shall apply:

Agricultural Area includes, but is not limited to, actively cultivated gardens, greenhouses, orchards, fields, pastures, and other areas under cultivation or agricultural management.

Applicant, any person representing any federal, state or local government or agency, utility, railroad or pipeline, that intends to maintain a right-of-way in the Commonwealth by application of herbicides.

Associated Surface Water Body, as identified on the most current available maps prepared by the Department of Environmental Protection, any body of water that is hydrologically connected to a Class A surface water source.

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

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

Certified Vernal Pool, a confined basin depression, certified and mapped by NHESP pursuant to the provisions of 310 CMR 10.57(2)(a)5. and 6., which, at least in most years, holds water for a minimum of two continuous months during the spring and/or summer, and which is free of adult fish populations.

11.02: continued

Certified Vernal Pool Habitat, that vernal pool habitat which has been certified and mapped by NHESP pursuant to the provisions of 310 CMR 10.57(2)(a)5. and 6. or, in the event that such habitat has not been mapped, the area extending 100 feet horizontally outward from the boundary of any Certified Vernal Pool.

Class A Waters, waters which are designated as a source of public water supply, as defined in 314 CMR 4.05(3)(a).

Class B Drinking Water Intakes, intakes to Class B waters suitable as sources of public water supply with appropriate treatment, as defined at 314 CMR 4.05(3)(b) and as identified on the most current available maps prepared by the Department of Environmental Protection.

Department, the Department of Agricultural Resources.

FIFRA, the Federal Insecticide, Fungicide and Rodenticide Act, Public Law 92-516.

Foliar Treatment, any technique which applies herbicide to leaves of target vegetation.

Inhabited Area, any area where people generally live, work or gather, including, but not limited to, any residence, school, hospital, park or recreational facility.

Interim Wellhead Protection Area (IWPA), for public water systems using wells or well fields that lack a Department of Environmental Protection-approved Zone II, an interim wellhead protection area, as that term is defined in the Massachusetts drinking water regulations, 310 CMR 22.02, and as identified on the most current available maps prepared by the Department of Environmental Protection, shall apply. Generally, this is a ½-mile radius for sources whose approved pumping rate is 100,000 gallons per day or greater. For smaller sources, the radius in feet is determined by multiplying the approved pumping rate in gallons per minute by 32 and adding 400.

Limited Application Waiver, a waiver from the requirements of 333 CMR 11.05 and 11.06, granted at the Department's sole discretion pursuant to 333 CMR 11.03(14), when the reason for the application is emergency public health or safety or when the application is for one time only.

Limited Spray Area, any area that is both within a Right-of-Way and within:

- (a) any Zone II or IWPA;
- (b) a distance of between 100 feet and 400 feet of any Class A Surface Water Source;
- (c) a distance of between ten and 200 feet of any tributary or associated surface water body where the tributary or associated surface water body runs outside the Zone A for the Class A surface water source;
- (d) a lateral distance of between 100 and 200 feet for 400 feet upstream, on both sides of the river, of a Class B Drinking Water Intake;
- (e) a distance of between 50 and 100 feet of any identified Private Well;
- (f) a distance of between 10 and 100 feet of any Wetlands or Water Over Wetlands;
- (g) a distance of between ten feet from the mean annual high water line of any river and the outer boundary of the Riverfront Area;
- (h) a distance of between ten feet from any Certified Vernal Pool and the outer boundary of any Certified Vernal Pool Habitat; and
- (i) a distance of 100 feet of any Agricultural or Inhabited Area.

Low Pressure, pressure under 60 pounds per square inch (psi).

Maps, United States Geological Survey maps of scale 1:25,000 or other maps, as determined by the Department, which are of such accuracy and scale to provide sufficient detail so that sensitive areas can be delineated.

NHESP, the Natural Heritage and Endangered Species Program within the Massachusetts Division of Fisheries and Wildlife.

11.02: continued

No-spray Area, any area that is both within a Right-of-Way and within:

- (a) any Zone I;
- (b) 100 feet of any Class A Surface Water Source;
- (c) 100 feet of any tributary or associated surface water body where the tributary or associated surface water body runs within 400 feet of a Class A surface water source;
- (d) ten feet of any tributary or associated surface water body where the tributary or associated surface water body is at a distance greater than 400 feet from a Class A surface water source;
- (e) a lateral distance of 100 feet for 400 feet upstream, on both sides of the river, of a Class B Drinking Water Intake;
- (f) 50 feet of any identified Private Well;
- (g) ten feet of any Wetlands or Water Over Wetlands;
- (h) ten feet of the mean annual high-water line of any river; and
- (i) ten feet of any Certified Vernal Pool.

Person, an individual, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or its political subdivisions, administrative agencies, public or quasi-public corporation or body, or any other legal entity or its legal representatives, agent or assignee, or a group of persons.

Person Aggrieved, 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 333 CMR 11.00. Such person must specify in writing sufficient facts to allow the Department to determine whether or not the person is in fact aggrieved.

Private Well, any private drinking water supply identified by the local Board of Health, the well owner or the Department of Agricultural Resources.

Private Well Registry, a registry of private wells located within 100 feet of a right-of-way which is maintained by the Department of Agricultural Resources. Homeowners must notify the Department by completing a registration form which is available directly from the Department or online at the Department website.

Public Water Supplier, as defined at 310 CMR 22.02(1), any person who owns or operates a public water supply system.

Public Ground Water Source, a source of water for a Public Water Supply System, as that term is defined in the Massachusetts drinking water regulations at 310 CMR 22.02.

Right(s)-of-way (ROW), any roadway, or thoroughfare on which public passage is made and any corridor of land over which facilities such as railroads, powerlines, pipelines, conduits, channels or communication lines or bicycle paths are located.

Rights-of-way Advisory Panel, a panel established to advise the Department on issues relating to 333 CMR 11.00 and to fulfill specific functions as detailed within 333 CMR 11.05 and 11.11.

River, a river as defined at 310 CMR 10.04 and as identified on the most current available maps prepared by the Department of Environmental Protection.

Riverfront Area, a riverfront area as defined at 310 CMR 10.58(2) and as identified on the most current available maps prepared by the Department of Environmental Protection. In general, this term shall mean the area between the mean annual high-water line of a perennially flowing river and a parallel line 200 feet away.

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

11.02: continued

Sensitive Areas, as defined in 333 CMR 11.04, any areas within Rights-of-Way, including No-Spray and Limited-Spray Areas, in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects.

State-listed Species, any species on the Massachusetts list of Endangered, Threatened, and Special Concern Species as described in the Massachusetts Endangered Species Act (M.G.L. c. 131A; 321 CMR 10.02).

State-listed Species Habitat, the Estimated Habitats of Rare Wildlife (310 CMR 10.59 and 10.37) and the Priority Habitats for State-listed Species (321 CMR 10.02) as shown on the most recent edition of the Massachusetts Natural Heritage Atlas prepared by NHESP.

Stem Treatment, any technique including, but not limited to, stump, basal, stem, injection, banding, frill, or girdle and any other technique which delivers herbicide at low pressure to the stump, base or stem of the target vegetation.

Surface Water Source, any lake, pond, reservoir, river, stream or impoundment designated as a public water supply in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, as identified on the most current available maps prepared by the Department of Environmental Protection.

Target Vegetation, any plant species which has the potential to interfere with the operation and safety of the right-of-way.

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

Tributary, as identified on the most current available maps prepared by the Department of Environmental Protection, any body of running, or intermittently running, water which moves in a definite channel, naturally or artificially created, in the ground due to a hydraulic gradient, and which ultimately flows into a Class A surface water source, as defined in 314 CMR 4.05(3)(a).

Vegetation Management Plan (VMP), a long term management plan for the applicant's right-of-way system which describes the intended program for vegetation control over a five year period.

Vernal Pool, *see* Certified Vernal Pool.

Water Over Wetlands, the ocean or any estuary, lake or pond as defined at 310 CMR 10.04.

Wetlands, any of the following areas as defined in 310 CMR 10.02(1)(a), (b), (c) and (f):

- (a) Any bank, the ocean
- any freshwater wetland, any estuary
- any coastal wetland, any creek
- any beach, bordering any river
- any dune, on any stream
- any flat any pond
- any marsh, or any lake
- or any swamp;
- (b) Land under any of the water bodies listed in 333 CMR 11.02: Wetlands(a); and
- (c) Land subject to tidal action.

## 11.02: continued

Wetlands Determination, a written determination of the boundaries of Wetlands and boundaries of areas within 100 feet of Wetlands in accordance with the regulations of the Department of Environmental Protection (DEP) at 310 CMR 10.05(3)(a)1. and 2. 310 CMR 10.03(6)(b) requires applicants not eligible for a public utility exemption to submit these determinations with their VMPs if they will apply herbicides within 100 feet of wetlands and will not submit a Notice of Intent under M.G.L. c. 131, § 40, the Wetlands Protection Act. In order to obtain a Wetlands Determination, the applicant should submit a request to the conservation commission on maps of a scale that will enable the conservation commission or Department of Environmental Protection to find and delineate the boundaries of Wetlands and buffer zones within the vicinity of the right-of-way herbicide management area. To be considered “valid”, the Wetlands Determination should be made no sooner than six months immediately prior to the submission of the Vegetation Management Plan. The Wetlands Determination shall cover the period of the Vegetation Management Plan only and shall expire at the end of the five year period of that Vegetation Management Plan.

Yearly Operational Plan (YOP), 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 Plan.

Zone A, as identified on the most current available maps prepared by the Department of Environmental Protection, the protective land area for a Surface Water Source, Class A water source, Tributary, or Associated Surface Water Body defined in 310 CMR 22.02 as:

- (a) the land area between the Class A surface water source and the upper boundary of the bank;
- (b) the land area within a 400 foot lateral distance from the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a); and
- (c) the land area within a 200 foot lateral distance from the upper boundary of the bank of a Tributary or Associated Surface Water Body.

Zone I, as identified on the most current available maps prepared by the Department of Environmental Protection and as defined at 310 CMR 22.02, the protective radius required around a public water supply well or wellfield. For public water system wells with approved yields of 100,000 gallons per day (gpd) or greater, the protective radius is 400 feet. Tubular wellfields require a 250 foot protective radius. Protective radii for all other public water system wells are determined by the following equation: Zone I radius in feet =  $(150 \times \log \text{ of pumping rate in gpd}) - 350$ .

Zone II, as identified on the most current available maps prepared by the Department of Environmental Protection and as defined at 310 CMR 22.02, the aquifer recharge area for a public water supply well or wellfield.

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 licensed by the Department and working under the on-site supervision of an appropriately certified applicator.
- (2) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way except in accordance with a Vegetation Management Plan (VMP) and a Yearly Operational Plan (YOP) as approved by the Department. The YOP shall be available at the work site at all times during herbicide applications and be made available to the Department and municipal officials including the Conservation Commission and Board of Health upon reasonable request.
- (3) No person shall handle, mix or load an herbicide concentrate on a right-of-way within 100 feet of a sensitive area.
- (4) The perimeter of any sensitive areas which are not readily identifiable on the ROW shall be identified with a clearly visible marker system, consistent with the VMP, prior to any herbicide application.

333 CMR: PESTICIDE BOARD

11.03: continued

- (5) No foliar application of herbicides shall be used to control vegetation greater than 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, and no person shall apply herbicides in such a manner that results in drift into any No-spray Area.
- (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 12 months of the initial application.
  - (b) All applicable public notification procedures of M.G.L. c. 132B, § 6B, as outlined in 333 CMR 11.07(1) and (3), are followed.
  - (c) No more than 10% of the initially identified target vegetation on the applicant's 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) The Department will maintain mailing lists of individuals and groups desiring to obtain notices on various aspects of the Program.
- (10) No person shall apply any herbicide identified as a Potential Ground Water Contaminant pursuant to 333 CMR 12.00 to a right-of-way.
- (11) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way unless that person has obtained the most current available map of public ground water sources from the Department of Environmental Protection.
- (12) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way unless that person has done one or more of the following:
  - (a) obtained a current list of identified Private Wells within 100 feet of the right-of-way from the Board of Health, or
  - (b) obtained a current list of all private wells, within 100 feet of the right of way from the Department of Agricultural Resources private well registry; or
  - (c) followed an alternative Private Well identification method outlined in an approved YOP.
- (13) The applicator shall provide any employee of any state agency, or authority as defined in M.G.L. c. 3, § 39, when such employee is, within a right-of-way, using pesticides, supervising the use of pesticides, or present during the use of pesticides, with personal protective equipment and clothing. Applicators should note that other federal or state laws or regulations pertaining to pesticide applications may require this personal protective equipment to include protections according to Material Safety Data Sheets (MSDS's), the product label, and any other supporting technical data supplied by the manufacturer.
- (14) Notwithstanding the provisions of 333 CMR 11.03(2) or other provisions of 333 CMR 11.00, the Department may, at its sole discretion, issue Limited Application Waivers to applicants wishing to apply herbicides to clear or maintain rights-of-way without VMPs or YOPs, but only under the following conditions:
  - (a) The applicant must demonstrate either:
    1. that the application will not occur more than once in a five-year period unless a VMP and a YOP are prepared and all other requirements of 333 CMR 11.00 are met; or
    2. that the application is necessary to protect public health or safety.
  - (b) The applicant must still adhere to all public notification requirements established at 333 CMR 11.07(1) and (3).
  - (c) The applicant must provide the Department with a letter establishing the concurrence of the chief elected official or board of selectmen of the municipality where the application is to be made.

## 11.03: continued

(d) The applicant may only use herbicides on the Department's "Herbicides Recommended for Use in Sensitive Areas List."

(e) If the application could impact Wetlands, the Department recommends that the applicant send a copy of its application for a Limited Application Waiver to the Department of Environmental Protection's Division of Wetlands and Waterways no less than 21 days before the proposed application.

(f) It should be noted that, with certain exceptions for public utilities, wetlands regulations at 310 CMR 10.03(6)(b) currently require Wetlands Determinations prior to any application within 100 feet of a Wetland.

Limited Application Waivers shall be issued solely at the Department's discretion, and 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.

11.04: Sensitive Area Restrictions(1) General. In any sensitive area:

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

(b) Herbicides shall only be applied selectively by low pressure, using foliar techniques or basal or cut-stump applications, or other method approved for use by the Department.

(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 feet of standing or flowing water in a wetland; or area within 400 feet of a public drinking water supply well; or area within 100 feet of any Class A surface water used as a public water supply; or area within 50 feet of a Private Well.

(d) Only herbicides specified by the Department as acceptable for use in sensitive areas pursuant to the Cooperative Agreement executed between the Department of Agricultural Resources and the Department of Environmental Protection on July 1 and 2, 1987, or future amendments thereto, shall be used in sensitive areas. 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 Cooperative Agreement may request that such herbicides be evaluated pursuant to said provisions. For an herbicide that has been evaluated pursuant to the provisions of the Cooperative Agreement, 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 request for such modification or waiver shall provide a detailed rationale for use, with 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 Agricultural Resources and Environmental Protection in the Cooperative Agreement.

Commentary. Applicants not eligible for the public utilities exemption from the Wetlands Protection Act outlined at 310 CMR 10.03(6)(a), who wish to apply pesticides registered for use in Massachusetts to rights-of-way, may choose to apply herbicides determined to be suitable for use in sensitive areas in accordance with the provisions of the Cooperative Agreement mentioned above or, alternatively, such applicants may proceed pursuant to the provisions of 310 CMR 10.00 as authorized by M.G.L. c. 131, § 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.

(f) In the event of a question or dispute as to which setback applies to a sensitive area, the most restrictive setback shall apply.

(2) Water Supplies.(a) Public Ground Water Sources.

1. No herbicides shall be applied within a Zone I.

2. No herbicides shall be applied within a Zone II or IWPA unless:

11.04: continued

- a. A minimum of 24 months has elapsed since the last application to the site; and
- b. Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.

(b) Class A Public Surface Water Sources, Associated Surface Water Bodies, Tributaries and Class B Drinking Water Intakes.

1. No herbicides shall be applied within 100 feet of any Class A public surface water source.
2. No herbicides shall be applied within 100 feet of any tributary or associated surface water body located within the Zone A of a Class A public surface water source, or within ten feet of any tributary or associated surface water body located outside of the Zone A of the Class A public surface water source.
3. No herbicides shall be applied within a lateral distance of 100 feet for 400 feet upstream of any Class B Drinking Water Intake.
4. No herbicides shall be applied within a distance of between 100 feet from any Class A surface water source and the outer boundary of any Zone A, or within a distance of between ten feet and the outer boundary of the Zone A for any tributary or associated surface water body located outside of the Zone A of a Class A surface water source, or within a lateral distance of between 100 and 200 feet for 400 feet upstream of a Class B Drinking Water Intake, unless:
  - a. A minimum of 24 months has elapsed since the last application to the site; and
  - b. Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.

(c) Private Wells.

1. No herbicides shall be applied within 50 feet of an identified Private Well.
2. No herbicides shall be applied within a distance of between 50 feet and 100 feet of an identified Private Well, unless:
  - a. A minimum of 24 months has elapsed since the last application to the site; and
  - b. Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.

(3) State-listed Species Habitat.

- (a) Any person proposing to apply an herbicide within any State-listed Species Habitat who does not have a current Yearly Operational Plan approved in writing by the Division of Fisheries and Wildlife pursuant to 321 CMR 10.14(12), shall submit all necessary materials required for review pursuant to 321 CMR 10.18.
- (b) The management of vegetation within existing utility rights-of-way shall be exempt from the requirements of 321 CMR 10.18 through 10.23, provided that the management is carried out in accordance with a Yearly Operational Plan approved in writing by the Division of Fisheries and Wildlife, pursuant to 321 CMR 10.14(12).
- (c) No person shall apply an herbicide within State-listed Species Habitat unless the application is approved by the Division of Fisheries and Wildlife pursuant to 333 CMR 11.04(3)(a) and (3)(b), and such approval is submitted to the Department.

(4) Wetlands, Waters Over Wetlands, Riverfront Areas, and Certified Vernal Pools.

- (a) No herbicide shall be applied on or within ten feet of a Wetland or Water Over a Wetland, within ten feet of the mean annual high-water line of any River, or within ten feet of any Certified Vernal Pool.
- (b) No herbicide shall be applied on or within a distance of between ten feet and 100 feet of any Wetland or Water Over a Wetland, within a distance of ten feet from the mean annual high-water line of any River and the outer boundary of any Riverfront Area, or within a distance of ten feet from any Certified Vernal Pool and the outer boundary of any Certified Vernal Pool Habitat unless:
  1. A minimum of 12 months has elapsed since the last application to the site; and
  2. Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.
- (c) Notwithstanding 333 CMR 11.04(4)(a) and (b), public utilities providing electric, gas, water, telephone, telegraph and other telecommunication services (and other applicants, if consistent with all relevant provisions of the Massachusetts Wetlands Protection Act and its regulations in effect at the time of application) may apply herbicides on or within ten feet of a Wetland in accordance with the following conditions:

## 11.04: continued

1. Submission of a study, the design of which is subject to prior approval by the Departments of Agricultural Resources and Environmental Protection, evaluating impacts of the proposed vegetation management program utilizing herbicides on or within ten feet of Wetlands, and comparing those impacts to those which would result if only non-chemical control methods were used in these areas. The study must detail vegetation management practices and use patterns specific to those used by the type of entity submitting the study; and
  2. A finding by the Department, after consultation with the Rights-of-way Advisory Panel, that the proposed vegetation management program utilizing herbicides on or within ten feet of Wetlands will result in less impacts to the Wetlands than mechanical control.
  3. Notwithstanding the above, no herbicides shall be applied on or within ten feet of any standing or flowing water in a Wetland.
- (5) Inhabited and Agricultural Areas. No foliar herbicide shall be applied within 100 feet of any Inhabited Area or any Agricultural Area unless:
- (a) A minimum of 12 months has elapsed since the last application to the site; and
  - (b) Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.

11.05: Vegetation Management Plan (VMP)

- (1) General.
  - (a) Unless otherwise specified by the Department, all VMPs should be submitted by the applicant no later than September 1<sup>st</sup> prior to the calendar year of the proposed first year of maintenance. All approved VMPs shall be effective for a five year period unless otherwise modified, or revoked by the Department.
  - (b) The VMP shall be presented on forms and/or format 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, timing of applications and alternative control procedures.
  - (d) Discussion of justification for proposed herbicide applications, including a description of the alternative control methods considered and the reasons that they were rejected.
  - (e) Methods, references and sources for identifying sensitive areas and control strategies proposed for sensitive areas. Applicants should note that the Department of Environmental Protection regulations at 310 CMR 10.03(6)(b) require Wetlands Determinations for applicants that are not eligible for a public utility exemption.
  - (f) Operational guidelines for applicators relative to herbicide use.
  - (g) Identification and qualifications of individuals developing and submitting a plan.
  - (h) A detailed description of the IPM Program, showing how it will 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.
  - (j) Description of a remedial plan to address spills and related accidents.
  - (k) For state agencies and authorities as defined in M.G.L. c. 3, § 39, a description of the applicant's policy to eliminate or, if necessary, reduce the use of pesticides for any vegetation management purpose along roadways, and a demonstration that, for the proposed application, the costs of non-chemical vegetation control significantly outweigh the benefits.
- (3) Public Notice, Review and Comment.
  - (a) Upon receipt of the proposed VMP, the Department shall schedule and hold appropriate regional public hearings affording all interested parties the opportunity to comment, both at the hearings and in writing to the Department, on the proposed plan.

## 11.05: continued

(b) At least 21 days prior to the public hearings, the Department shall publish notice of the hearings in the *Environmental Monitor* and regionally located newspapers, and send notice to municipalities covered by the plan and to the appropriate mailing list. The notice will include locations where copies of the VMP can be reviewed.

(c) The public shall have no less than 45 days, starting from publication of the *Environmental Monitor* notice, to comment upon proposed VMPs, unless the Department extends the comment period for good cause.

(d) Wherever a chief elected official, Board of Health or Conservation Commission in a municipality covered by the proposed VMP requests a copy of the proposed plan, the applicant shall, at least 21 days prior to the end of the public comment period, respond to this request. The response must either include a copy of the proposed VMP, or an Internet address where the VMP may be viewed and a note that a hard copy will be provided promptly upon further request.

(4) Disposition of VMP.

(a) 25 copies of the proposed VMP shall be submitted to the Department. The Department shall distribute copies of the proposed VMP to each member of the Rights-of-way Advisory Panel. The Department may, at its sole discretion, allow electronic presentation of the VMP in lieu of some or all of the 25 copies that would otherwise be submitted pursuant to 333 CMR 11.05(4).

(b) Within 30 days of the end of the public comment period unless extended for good cause, the Rights-of-way Advisory Panel shall review the VMPs and recommend in writing to the Department approval, denial or modification of each VMP; if necessary, the Advisory Panel may request additional information from the applicant.

(c) Within 21 days of the end of the Rights-of-way Advisory Panel review period, unless extended by the Department for good cause, the Department will notify the applicant and the Advisory Panel in writing one of the following:

1. request for additional information or modification;
2. denial of VMP; or
3. approval of 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.

(f) The applicant must send a copy of the approved VMP, or an Internet address where the VMP may be viewed and a note that a hard copy will be provided promptly upon further request, to the chief elected official, Board of Health, and Conservation Commission in each municipality covered by the plan.

(5) Time for Action. Non-action by the Department on a VMP within the time specified in 333 CMR 11.05 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 in 333 CMR 11.05(4) and upon written request from the applicant, the Commissioner must issue a finding within ten 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 and in a format approved by the Department.

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

(a) Maps locating the rights-of-way and sensitive areas not readily identifiable in the field;

(b) Herbicides proposed including Environmental Protection Agency (EPA) Registration numbers, application rates, carriers and adjuvants;

(c) Herbicide application techniques and alternative control procedures proposed.

(d) The name, address and phone number of the company which will perform any herbicide treatment;

11.06: continued

- (e) Identification of target vegetation;
- (f) The name, address and phone number of the individual representing the YOP applicant;
- (g) Description of methods used to flag or otherwise designate sensitive areas on the right-of-way;
- (h) Herbicide Fact Sheets as approved by the Department; and
- (i) Procedures and locations for handling, mixing and loading of herbicide concentrates.

(3) Public Notice, Review and Comment.

- (a) Upon submittal of the YOP for approval, the Department will publish a notice in the *Environmental Monitor*. Said notice shall be provided by the applicant and shall include the information on the municipalities through which the rights-of-way pass, a brief description of the intended program, and the procedure for public review and comment. The Department shall send notification of the publication to the applicant and the appropriate mailing list.
- (b) Upon submittal of the YOP to the Department, the applicant shall provide by certified mail under separate cover to the Board of Health, Conservation Commission, chief elected municipal official, and where applicable, the Massachusetts Water Resources Authority and Massachusetts Department of Conservation and Recreation, a copy of the proposed YOP (or an Internet address where the proposed YOP may be viewed and a note that a hard copy will be provided promptly upon request) and the *Environmental Monitor* notice for the municipality or municipalities in which the herbicide treatment is proposed. Community water suppliers shall receive electronic information or a one page notification by mail which provides details about where to receive more information. The applicant shall maintain copies of the packet sent to municipalities and certified mail receipts. The applicant shall make copies of the packet, certified mail receipts, and any further correspondence regarding hard copies of YOPs in lieu of Internet viewing, available to the Department upon request.
- (c) The Department shall allow a 45-day comment period on proposed YOPs, unless extended for good cause, commencing with the publication of the notice in the *Environmental Monitor* and receipt of the proposed YOP and *Environmental Monitor* notice by each municipality.
- (d) The Department may approve, deny or modify YOPs after the 45-day comment period has expired.

(4) Disposition of YOP.

- (a) The applicant shall submit the YOP to the Department at least 90 days prior to the proposed commencement of application to allow completion of the comment and review period.
- (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 with the YOP to the applicant.
- (c) Where practical, the Department shall approve or deny the YOP within 90 days of receipt. The Department will provide notice of the decision to the applicant, municipal agencies and commentators in writing.
- (d) The approved YOP in conjunction with the VMP shall govern the application of herbicide for a period not to exceed 12 months in accordance with other laws and regulations of the State and Federal governments 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 by the Department on a YOP within the time specified in 333 CMR 11.06(4) 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 and upon a written request from the applicant, the Commissioner must issue a finding within ten days of receipt stating the reason for the delay and providing an estimated completion date.

11.07: Public Notification

(1) At least 21 days in advance of application of herbicide to a right-of-way in any city or town, the applicant shall notify the Department, the board of health, and the local public water supplier and, by registered mail, the Mayor, City Manager or Chairman of the Board of Selectman, and the conservation commission in the municipality where the right-of-way lies. The notice shall include the following information: the approximate dates on which such herbicide application shall commence and conclude, provided however, that said application shall not commence more than ten days before nor conclude more than ten days after said approximate dates; the method and locations of application; a Department-approved Herbicide Fact Sheet on the active ingredient(s) of the herbicide(s) used; the EPA registration number(s) for the herbicide(s) used; the name, title, business address and phone number of the certified commercial applicator or licensed applicator, or the contractor, employer or employees responsible for carrying out the application. Where specific information required for this notice is already contained in the current YOP that is on file with the local official, the applicant may incorporate the appropriate pages of the YOP by reference in its notice to that official, indicating that these pages are also directly available from the applicant upon request.

(2) This public notice may run concurrently with the public notice and comment period in 333 CMR 11.06(3), provided that the notice is distributed at least 21 days prior to the herbicide application, and that, prior to the herbicide application, the public notice and comment period has closed and the Department has granted YOP approval without modifications. When the Department's final approval requires modifications or application dates are selected after YOP approval, separate notice under 333 CMR 11.07(1) is required.

(3) At least 48 hours prior to the application referred to in 333 CMR 11.07(1), the applicant must publish a conspicuous notice in at least one newspaper of general circulation in the city or town where the right-of-way lies. The notice must appear in the local section of the newspaper and measure at least four by five inches in size. The notice shall contain the following information: the method and locations of pesticide application; the approximate dates on which the pesticide application shall commence and conclude, provided that the applications shall not commence more than ten days before nor conclude ten days after said approximate dates; a list of potential pesticides to be used; a description of the purpose of the application; and the name, title, business address and phone number of a designated contact person representing the applicant from whom any citizen may request further information. The notice should apply only to the calendar year in which the notice is published. Upon request the notice must be made available to the Department.

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 YOP. After 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 effects on the environment or on human health; or
- (b) that the applicant has made a false or misleading statement or has not provided information requested by the Department or Rights-of-way Advisory Panel; 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 the 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.

## 333 CMR: PESTICIDE BOARD

### 11.09: Right-of-appeal

Any person aggrieved by the decision of the Department to approve, deny, modify or revoke a VMP or YOP may request an adjudicatory hearing. The request for a hearing must be received by the Department within 21 calendar days after receipt of the decision. 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 in accordance with the informal rules of adjudicatory proceeding as set forth in M.G.L. c. 30A.

### 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, § 14.

### 11.11: Rights-of-way Advisory Panel

(1) A Rights-of-way Advisory Panel shall be established to advise the Department on issues relating to 333 CMR 11.00 and to fulfill specific functions as detailed within 333 CMR 11.00.

(2) The Department shall request that the following members participate on the Rights-of-way Advisory Panel: the Commissioners/Secretaries or his/her designee of the Department of Environmental Protection, the Department of Public Health, and the Executive Office of Transportation; and a representative, respectively, from each of the following, all to be appointed by the Department Commissioner: the Massachusetts Association of Conservation Commissions, the Massachusetts Association of Health Boards, the Massachusetts Department of Conservation and Recreation, and an Environmental Advocacy Organization Representative, a member of the University of Massachusetts Extension who is well versed in weed science and Integrated Pest Management of weeds, a representative of the Massachusetts Railroad Association, a representative of a utility company and a commercial pesticide applicator.

(3) Non-agency representatives shall remain on the panel for a term of five years. Any member absent from two or more consecutive meetings may be removed from the Advisory Panel at the discretion of the Commissioner of the Department, and a replacement requested from the representative agency, industry group, or association.

(4) The Advisory Panel shall meet at least once each year, and shall hold further meetings upon the request of the Department of Agricultural Resources or at the request of any two members of the Advisory Panel.

(5) All Advisory Panel members shall serve without compensation.

## REGULATORY AUTHORITY

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

NON-TEXT PAGE

## Appendix 3

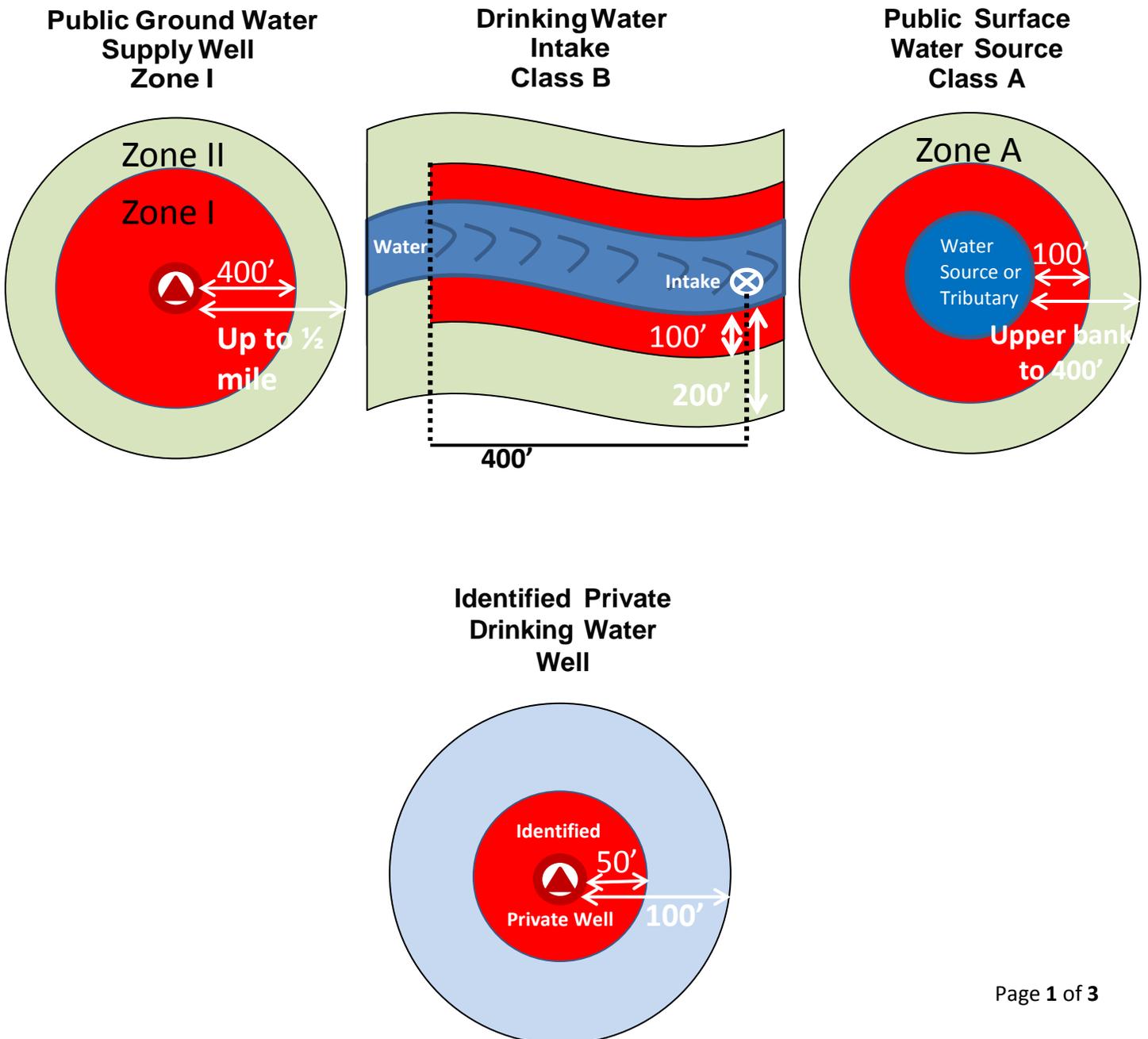
### Sensitive Area Illustration

# Vegetation Control Strategies in Sensitive Areas

Required by 333 CMR 11.00 and/or approved Vegetation Management Program and Yearly Operational Plan

Sensitive areas not readily identified in the field:

- Mapped on electronic USGS Topographic Maps.
- Contractor will be provided electronic and hard copy of maps with which to flag the boundaries of no-herbicide zones within the right-of-way (ROW) prior to herbicide application.

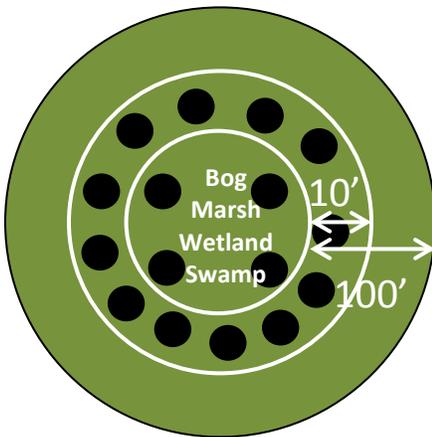


Sensitive areas readily identifiable in the field:

- Consult USGS Topographic Maps
- Contractor will be provided electronic and hard copy of maps with which to flag the boundaries of no-herbicide zones within the right-of-way (ROW) prior to herbicide application
- Contractor will mark additional areas not found on maps

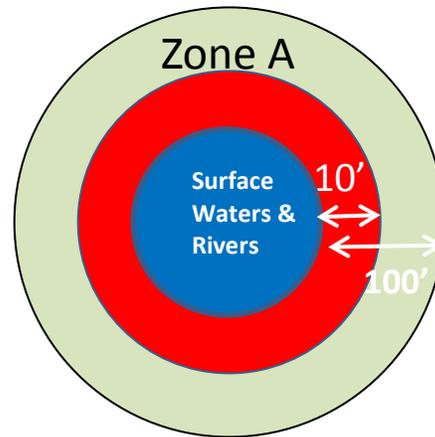
**Wetlands**

Defined by Chapter 131, Section 40

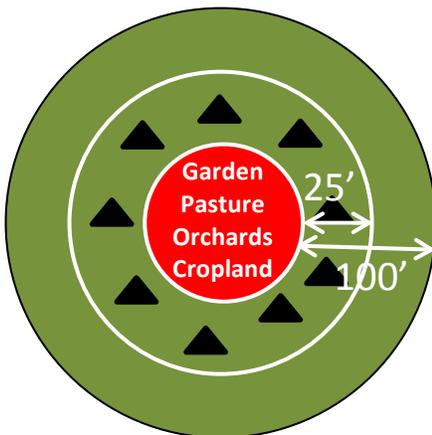


**Surface Waters and Rivers**

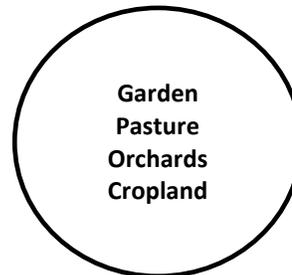
All surface water and water over wetlands. Mean high water for rivers.



**Active Agricultural Areas**



**Inactive Agricultural**

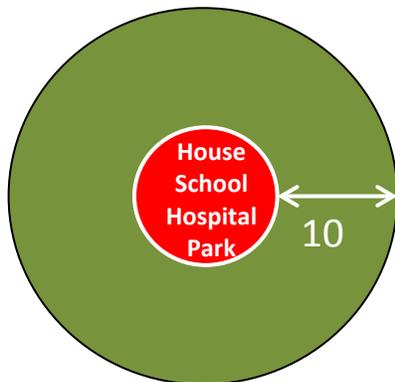


No Restrictions

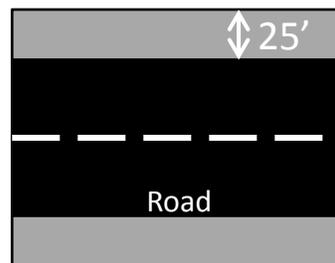
Sensitive areas readily identifiable in the field: (continued)

- Consult USGS Topographic Maps
- Contractor will be provided electronic and hard copy of maps with which to flag the boundaries of no-herbicide zones within the right-of-way (ROW) prior to herbicide application.
- Contractor will mark additional areas not found on maps

**Inhabited Areas**  
Where people live, work, or gather



**Road Crossings**



Foliar Spray of resprout permitted

**KEY**

	= No Herbicide Use			= Limited Herbicide Use
	= Water			
	= Public Ground Water Supply Well or Private Well			
<b>Must adhere to the following:</b>				
1) Herbicide recommended for use in sensitive area: per (333CMR 11.04(1)(d))				
2) Cut Stump, basal and <u>low</u> pressure foliar				
3)  24 months elapsed since previous treatment				
12 months elapsed since previous treatment				
4)  No herbicides applied to conifer species and carriers reviewed by DAR and DEP.				
5)  Cut Stump Only				
6)  Cut Stump and Basal treatment. (foliar application to resprouts permitted) No other conditions.				

Appendix 4  
Herbicide Labels

Appendix 5  
Herbicide Fact Sheets