

**TENNESSEE GAS PIPELINE COMPANY  
COMMONWEALTH OF MASSACHUSETTS  
2012 YEARLY OPERATIONAL PLAN**

Submitted by:  
Tennessee Gas Pipeline Company

Prepared By:  
 Vegetation Control Service, Inc.

**Submitted: April 9, 2012**

## SUMMARY

In compliance with the Massachusetts Department of Agricultural Resources' Rights-of-Way Regulations (333 CMR 11.00), this Yearly Operational Plan (YOP) informs municipalities of Tennessee Gas Pipeline Company's (Tennessee) intent to utilize state recommended herbicides on electric rights-of-way (ROW) in 2012.

The application of herbicides will be carried out within the specifications of our Integrated Vegetation Management program, outlined in our five year Vegetation Management Plan.

This YOP identifies target vegetation; the affected rights-of-way and towns; the herbicides, rates and methods of application; alternative control methods; the individual responsible for supervising the YOP, and the qualified contractors that will perform the application. It explains how sensitive areas; buffer zones and sites where herbicides are either restricted or not permitted are identified, appropriately marked, treated and protected. It addresses procedures for the mixing, handling and loading of herbicide concentrates. Finally, it includes Herbicide Fact Sheets and Labels, a list of emergency resources and telephone numbers, and maps marked with known *Sensitive Areas*.

The YOP process provides for a forty-five day public review and comment period, in conjunction with the twenty-one day municipal Rights-of-Way notification period. These review periods give communities an opportunity to provide information that will help identify additional areas that may require specific precautions or protection. Notice will also be published in general circulation newspapers at least 48 hours before the scheduled application.

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**THE INDIVIDUALS RESPONSIBLE FOR SUPERVISING THE YOP:**

**REGULATORY AND NOTIFICATION QUESTIONS:**

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**OPERATIONS QUESTIONS:**

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HOPKINTON, MA 01748**

**(508) 435-6812**

## SECTION 1: INTRODUCTION

To manage vegetation on its natural gas pipelines system under an IVM program in the Commonwealth of Massachusetts, Tennessee Gas Pipeline Company (Tennessee), part of El Paso Corporation's Eastern Pipeline Group, hereby submits this 2012 Yearly Operational Plan in compliance with 333 CMR 11.00, *Rights of Way Management* regulations; Chapter 132B, *Pesticide Control Act*; all pertinent clauses in *Chapter 85 of the Acts of 2000*; MGL c.131, *Massachusetts Endangered Species Act* and its regulations, 321 CMR 10.00, *Massachusetts Endangered Species Regulations*; 310 CMR 10.00, *Wetlands Protection* regulations and 310 CMR 22.00, *Drinking Water* regulations of the Massachusetts Department of Environmental Protection.

Tennessee must also comply with all applicable federal regulations including, but not limited to *The Endangered Species Act*; *The Migratory Bird Treaty Act*; *The Federal Natural Gas Act*, 15 U.S.C. §§ 717 *et seq.*; the *Federal Natural Gas Pipeline Safety Act*, 49 USC §§ 60101 *et seq.*; the *Federal Hazardous Materials Transportation Act*, 49 CFR, Part 192; all applicable Federal Energy Regulatory Commission (FERC) standards, *Federal Occupational Safety and Health Act* (OSHA) regulations, and Department of Environmental Protection (EPA) regulations.

The YOP details Tennessee's plans for 2012 and is a companion document to the *Tennessee Gas Pipeline Company Commonwealth of Massachusetts Five-Year Vegetation Management Plan, 2012-2015* (VMP) which may be viewed at the following location:

<http://www.kenersongroup.com/yop/2012/TennesseeGas/>

The VMP details Tennessee's Integrated Vegetation Management Program (IVM) which takes into consideration all factors involved in the maintenance and operation of pipeline ROWs and unfenced equipment. Both the VMP and the YOP reflect Tennessee's intent to prevent any unreasonable adverse effects to the environment and to the safety and health of animals and humans while supporting Tennessee's primary obligation of delivering natural gas. As defined in the VMP, the IVM program supports this goal by combining mechanical, chemical and natural controls.

Tennessee has over 500 miles of high-pressure natural gas pipeline and associated equipment in the Commonwealth of Massachusetts. It maintains its pipeline in easements ranging from twenty feet in width on its laterals and up to 120 feet in areas of multiple pipelines. To maintain regulatory compliance, these pipeline rights-of-way (ROWs) need to be kept clear of all but low vegetation.

At the same time, since Tennessee personnel must maintain cathodic protection installations and appurtenances including rectifiers, magnesium groundbeds and test stations along the buried steel pipelines, these installations and appurtenances will be treated to control noxious weeds, particularly poison ivy, and other plants that impede access to the equipment for maintenance and emergencies.

The YOP provides guidance for both Tennessee and contract personnel and serves as a communication link for state and municipal officials, property owners, abutters and the public-at-large. This objective will be accomplished through the VMP, YOP, appropriate notification documentation and procedures, and with professionalism and courtesy on the part of Tennessee and contract field personnel.

## 2. LOCATION OF INTENDED TREATMENTS

In 2012 Tennessee plans on completing herbicide applications on 22 (24 pipelines) ROWs as listed in Table 1. Table 2 is a list of the 59 municipalities through which at least one of the ROWs scheduled for a 2012 IVM treatment passes (see Appendix 1, Maps).

**Table 1: 2012 Rights-of-Way**

ROW Number	Name
270C-500	Gloucester Lateral
268A-100	Fitchburg Lateral
270C-100 & 270C-900	Beverly-Salem Lateral and Peabody Lateral
270B-100 & 273C-100	Concord Lateral and Dracut Lateral
256A-100	North Adams Lateral
200 Line 1,2,3	MP255-1+1.01 to MLV 264-1 MP255-2+1.02 to MLV 264-2 MP255-3+1.01 to MLV 258-3
270C-200	Reading Lateral
268A-300	Leominster Lateral
270C-400	Lynn Lateral
268A-200	Clinton Lateral
270A-100	Arlington Lateral
270C-1100	Domac Line
270C-300	Malden-Melrose Lateral
256B-100	Stockbridge Delivery
263A-100	Millennium Delivery
256A-200	Pittsfield Delivery
260A-200	Westfield Delivery
261BP-100	Berkshire Power Delivery
261B-100	Springfield Delivery
259B-100	Torrington Lateral
256C-100	North Adams Number Two Lateral
260A-100	Northampton Lateral

**Table 2: List of Affected Municipalities**

Adams	Everett	Lynn	Sandisfield
Agawam	Gloucester	Malden	Southampton
Arlington	Granville	Marlboro	Southwick
Billerica	Hamilton	Melrose	Stockbridge
Bolton	Hampden	Monson	Sturbridge
Burlington	Holland	Monterey	Tewksbury
Charlton	Holyoke	North Adams	Tolland
Cheshire	Hudson	Northampton	Tyringham
Clinton	Lancaster	Otis	Wales
Danvers	Lanesborough	Peabody	Wenham
Dracut	Lee	Pittsfield	Westfield
East Longmeadow	Leominster	Reading	Wilmington
Easthampton	Longmeadow	Revere	Winchester
Essex	Lunenburg	Richmond	Woburn
Framingham	Lynnfield	Saugus	

### SECTION 3: REGULATIONS AND NOTIFICATION

As a natural gas pipeline company, Tennessee must comply with a large number of federal laws and regulations. The objective of a number of detailed environmental protection regulations in Massachusetts also serve as guides in the proper implementation of annual IVM programs. All Tennessee and contractor personnel involved in the 2012 IVM program, must, therefore, be familiar with how these various regulations affect their actions.

To aid municipal officials, property owners, abutters and the public-at-large, this section is a short discussion of the two primary Massachusetts legal documents, Chapter 132B and 333 CMR 11.00 (both of which may be found in the VMP) that guide IVM, along with the additional voluntary notification that Tennessee will perform before implementing the 2012 IVM program.

The establishment of Chapter 132B created a clear and uniform set of standards for the entire Commonwealth of Massachusetts *in order to protect the public from the negative impacts that arise from fragmented, decentralized, sets of standards*. In this effort, the Commonwealth, through the Department of Agricultural Resources (DAR) retains the sole right to regulate the use of pesticides, including herbicides, throughout Massachusetts. DAR takes this responsibility extremely seriously and the regulations promulgated from Chapter 132B are stricter than Federal EPA standards.

333 CMR 11.00 is the most comprehensive rights of way regulation in New England. It requires an Integrated Pest Management (in this case IVM) approach to ROW vegetation management; the establishment of standards and procedures to prevent unreasonable risks to humans or 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 Tennessee's VMP, annual YOPs, *The Environmental Monitor* notice, 21 day notification, Public Water Supplier notification and 48 hour newspaper notice.

Tennessee also voluntarily notifies landowners (includes houses and businesses that are within 300 feet of the ROWs treated in that year) before treatments begin. Tennessee will mail out a notification letter to landowners with instructions to call the listed offices for additional information, questions or concerns, including the identification of private wells. Treatment contractors will also leave door hangers or talk personally with landowners, which allow the contractor to answer site specific questions, identify private wells and help explain the program (See Appendix 2).

## SECTION 4: TARGET VEGETATION

To stay in compliance with various federal codes of regulations, Tennessee's goal is to establish stable, predominately grass or forbs plant communities along the ROWs by the management and removal of undesirable vegetation types ("target vegetation"). Most woody vegetation and noxious vegetation—invasive and poisonous plant species—interfere with the safe, efficient and regulatory compliant operation of a pipeline.

The primary target vegetation on Tennessee's ROWs includes, but is not limited to:

1. **Trees** such as Aspen, Beech, Birch, Cherry, Maples, Oak and Pines
2. **Shrubs** such as Dogwood, High Bush Blueberry, Mountain Laurel, Speckled Alder, Sumac, Viburnum and Witch Hazel
3. **Woody vines and other vegetation** such as Virginia Creeper, Greenbrier, wild grapes and blackberries
4. **Invasive plant species** such as Oriental Bittersweet, Japanese Knotweed, Multiflora Rose, Autumn Olive, Buckthorn, Honeysuckle, Purple Loosestrife and Phragmites
5. **Poisonous plant species** such as Poison Ivy, Poison Sumac, Poison Oak and Giant Hogweed.

Very low growing woody and herbaceous plants, grasses and forbs that compete with taller woody vegetation do not generally interfere with the function of the pipeline. At the same time, these early successional ecological communities are excellent wildlife habitat for many plant, mammal, bird, reptile, amphibian and invertebrate species, including a number of Federal and/or State-listed rare, endangered or threatened species. A partial list of compatible early successional plant species includes, but is not limited to, Low-bush Blueberry, Huckleberry, Sweet fern, grasses, ferns and wildflowers.

## SECTION 5: VEGETATION MANAGEMENT METHODS

The following is a short descriptive listing of Tennessee's intended vegetation management methods detailing the individual techniques available. The goal is to achieve a long term, low maintenance IVM program (A more detailed description is included in the VMP). The treatment methods used on any given ROW are based on site sensitivity, regulatory mandates, target species composition, density and height, site access and topography.

### ***CHEMICAL (HERBICIDE) CONTROL METHODS:***

Chemical control methods—foliar, basal and CST—consist of herbicides applied as mixtures consisting of herbicide(s), adjuvants, carriers and additives.

#### ***The following guidelines are observed in all herbicide applications:***

1. Herbicide applications follow all restrictions in 333 CMR 11.00
2. Herbicide applications follow all *sensitive area* restrictions in 333 CMR 11.04
3. Foliar herbicide applications are not applied to targets over 12 feet in height
4. Foliar treatments are allowed in wetland areas where no standing water is present, as per the Department of Food and Agriculture *Decision Concerning the Wetland Impact Study Conducted Pursuant to 333 CMR 11.04 (4)(C)(2)*, dated October, 1995.
5. All herbicide applications are performed by experienced, trained vegetation management personnel with Massachusetts pesticide applicator licenses working under the direct supervision of a certified pesticide applicator.

***Low Volume Backpack Foliar Techniques*** utilize hand-operated pumps or motorized, backpack sprayers that deliver the herbicide mixture in small droplets from three to five gallon spray tank to the target vegetation. Both techniques only require the applicator to dampen or lightly wet the target leaf area not to the point of runoff.

***Vehicle Mounted Techniques*** generally utilizes a 100-500 gallon hydraulic sprayer mounted on a truck, tractor or tracked vehicle equipped with hand-held spray guns. The herbicide mixture is directed at selective vegetation or broadcast for uniform coverage. Specially designed showerhead type nozzles deliver effective spray coverage at relatively low spray pressures of sixty psi and less.

***CUT STUMP SURFACE TREATMENTS:*** The application of an herbicide mixture directly to the cut surface of a stump immediately following or during a cutting operation to prevent resprouts and root suckering. Application equipment includes hand-pump backpack sprayers; hand held squirt bottles; paintbrushes, or sponge applicators.

***LOW VOLUME BASAL TREATMENT:*** the selective application of an herbicide diluted in specially formulated oil using a hand pump backpack sprayer to wet the entire lower twelve to eighteen inches of the main stem of target plants.

***ALTERNATIVE MECHANICAL METHODS:***

Mechanical control methods include mowing, hand cutting and side trimming. These methods are used to maintain the edge of the ROW; remove hazard trees; remove or control target vegetation greater than twelve feet in height, in areas of dense vegetation and to protect environmentally and culturally sensitive areas particularly where herbicide use is prohibited or not appropriate for the site.

***HAND CUTTING:*** the use of chain and brush saws to remove the stem and/or branches from the plant's root system. Hand cutting is used in preparation for herbicide applications and on sites where terrain, target species size or sensitivity renders mowing impossible or impractical.

***MOWING:*** the cutting, severing or shattering of vegetation by large rotary or flail mowers.

***SIDE TRIMMING:*** the side trimming or removal of encroaching tops and/or branches of trees growing on or near the ROW which may cause a hazard, hamper access and/or impede visual inspections. This management technique is usually accomplished by the use of an aerial lift mounted on a street or off-road vehicle, although, tree climbing is sometimes employed in situations where terrain prevents the passage of equipment.

## SECTION 6: PROPOSED HERBICIDES, CARRIERS, ADJUVANTS, RATES AND GENERAL INFORMATION

Beyond regulatory requirements, Tennessee only approves the use of herbicides from the *Herbicides Recommended for Use in Sensitive Areas List (Sensitive Area Materials List)*. Licensed and/or certified applicators will only apply these herbicides in compliance with all labeled directions.

All herbicides will be handled, mixed and applied strictly according to *Label Instructions* and in compliance with all applicable federal and state laws and regulations. All herbicide mixing should be done at the contractor's facilities and extreme care shall be exercised during all mixing, handling and loading to prevent careless spills or splashes. No herbicide concentrates will be mixed, handled or loaded on a ROW within one hundred (100) feet of a Sensitive Area.

For more information on the herbicides listed below, Commonwealth of Massachusetts Herbicide Fact Sheets and Manufacturer's Labels are included in Appendices 3 and 4, respectively.

**Table 3: Herbicides included in Tank Mixes for Low Volume Foliar Applications**

Herbicides & Adjuvants	Active Ingredient	EPA Registration Number(s)	Mix Concentration (Carrier: Water)	Estimated Application Rate Per Acre
Accord Concentrate or Rodeo (same EPA #)	Glyphosate	62719-324	3-5%	16-128 oz.
Krenite S	Fosamine	352-395	6-10%	32-128 oz.
Escort XP	Metsulfuron-Methyl	352-439	2-4 oz.	0.125-0.8 oz.
Arsenal, Arsenal Powerline or Polaris <sup>1</sup>	Imazapyr	241-346, 241-431 or 228-534	0.125%-.5%	2-8 oz.
Induce, Clean Cut, Aqua Fac or equivalent surfactant <sup>2</sup>	n.a. <sup>3</sup>	n.a.	0.125%-1%	1-16 oz.
Point Blank, Stay Put Plus or equivalent anti-drift adjuvant	n.a.	n.a.	6-64 oz.	1-2 oz.
Carrier: Water	n.a.	n.a.	n.a.	Carrier: Water

**Table 4: Herbicides included in Tank Mix for Cut Surface Treatment (CST) Applications**

Herbicides & Adjuvants	Active Ingredient	EPA Registration Number(s)	Mix Concentration (Carrier: Water)	Estimated Application Rate Per Acre
Accord Concentrate or Rodeo (same EPA #)	Glyphosate	62719-324	40% to 50%	Per density of target stems
Arsenal, Arsenal Powerline or Polaris	Imazapyr	241-346, 241-431 or 228-534	3%-5% (mixed with Accord Concentrate)	Per density of target stems
Carrier: Water or Non-Freezing Liquid	n.a.	n.a.	n.a.	Carrier: Water

<sup>1</sup>Imazapyr will not be applied on the same right-of-way in two consecutive years.

<sup>2</sup>Equivalent surfactants, drift retardants and basal oils will only be used in case those listed are no longer available or more effective alternatives become available.

<sup>3</sup> n.a.—not applicable

**Table 5: Tank Mix for Poison Ivy, Noxious and Invasive Species**

Herbicides & Adjuvants	Active Ingredient	EPA Registration Number(s)	Mix Concentration (per 100 gals. water)
Accord Concentrate or Rodeo (same EPA #)	Glyphosate	62719-324	2-5%
Escort XP	Metsulfuron-Methyl		1.25-4 oz
Induce, Clean Cut, or equivalent surfactant	not applicable	n.a.	0.125%-1%
Point Blank, Stay Put Plus or equivalent anti-drift adjuvant	n.a.	n.a.	4-16 oz.
Carrier: Water	n.a.	n.a.	n.a.

**Table 6: Alternate Tank Mix for Poison Ivy, Noxious and Invasive Species**

Herbicides & Adjuvants	Active Ingredient	EPA Registration Number(s)	Mix Concentration (per 100 gals. water)
Garlon 4 or Garlon 4 Ultra	Triclopyr	62719-40 or 62719-527	2-4%
Induce, Clean Cut, or equivalent surfactant	n.a.	n.a.	0.125%-1%
Point Blank, Stay Put Plus or equivalent anti-drift adjuvant	n.a.	n.a.	4-16 oz.
Carrier: Water	n.a.	n.a.	n.a.

**Note: Anti-drift Adjuvants** are added to the mix or solution in foliage applications to reduce potential exposures to non-target organisms, reduce the break-up of sprays into fine droplets and increase selectivity and herbicide deposition onto target plants.

**SECTION 7: THE COMPANIES THAT WILL PERFORM THE HERBICIDE TREATMENT**

Vegetation Control Service, Inc.  
 2342 Main Street  
 Athol, MA 01331  
 (978) 249-5348

Lewis Tree Service  
 300 Lucius Gordon Drive  
 West Henrietta, NY 14586  
 (413) 237-9870

Asplundh Tree Expert Co.  
 224 Gould Rd.  
 Weare, NH 03281  
 (603) 529-1690

Lucas Tree Experts  
 PO Box 616  
 Plymouth, NH 03264  
 (603) 536-1166

## **SECTION 8: SENSITIVE AREA IDENTIFICATION AND PROPOSED CONTROL STRATEGIES**

Per 333 CMR 11.02, *sensitive areas* are "any areas within rights-of-way...in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects.

*Sensitive areas* consist of no-spray areas in which herbicide use is prohibited, limited spray areas where herbicide use is permitted under certain conditions, and areas that require special treatment recommendations. Protecting these environmentally and culturally sensitive sites is accomplished by establishing treatment prescriptions based on the sensitivity of each site and the requirement to minimize any unreasonable adverse impacts within that area (See Table 5).

Only herbicides from the *Sensitive Area Materials List*—pursuant to 333 CMR 11.04 (1)(d)—will be applied in limited spray areas according to the application restrictions in 333 CMR 11.04 or in the case of the Priority Habitat of state-listed species, approval of the YOP by the Natural Heritage and Endangered Species Program of the Massachusetts Department of Fisheries and Wildlife (NHESP).

Above and beyond the regulation, Tennessee's policy is to use herbicide on the *Sensitive Areas Materials List* on their entire ROW system in Massachusetts, which besides the general environmental benefits of this policy, further protects limited spray *sensitive areas*.

### ***IDENTIFICATION OF SENSITIVE AREAS***

*Sensitive areas* can be divided into two categories that help the individuals assigned the task of identifying and treating them in the field: "readily identifiable in the field" and "not readily identifiable in the field." Readily identifiable in the field areas will be treated, identified and when appropriate, marked according to all applicable restrictions listed in 333 CMR 11.00. Not readily identifiable in the field areas will likewise be treated and marked when appropriate, but they are identified by the use of data marked on maps and collected in the YOP and notification processes.

As appropriate, therefore, *sensitive areas* will be identified and marked in the field by either trained and experienced Tennessee and/or vegetation management contractor personnel, and/or by individuals trained in the identification of *sensitive areas* using the complete list of resources detailed in the VMP that includes:

1. Tennessee's pipeline alignment sheets, maps, records and institutional knowledge
2. Massachusetts Department of Environmental Protection water supply GIS mapping layers
3. Information from municipalities and abutters on private wells
4. Municipality and abutter correspondence, meetings and input, including information information from the notification process
5. USGS topographical maps
6. Confidential information from NHESP

### ***CONTROL STRATEGIES FOR SENSITIVE AREAS:***

Mandated *sensitive areas* will be treated following the restrictions and appropriate recommendations in all applicable state and federal regulations. Tennessee also reserves the right to designate additional areas as sensitive that require special treatment considerations including, but not limited to landowner agreements, original agreements from the construction permitting process, visual or environmental impact considerations, and other considerations that arise during the treatment cycles.

**TABLE 7: CONTROL STRATEGIES FOR SENSITIVE AREAS**

<i>Sensitive Area</i>	No-Spray and Limited Spray Areas (feet)	Control Method	Restriction Code
Public <b>Ground</b> Water Supplies	400'	Mechanical Only	None
Primary Recharge Area	Designated buffer zone or 1/2 mile radius	Mechanical, Recommended Herbicides*	24 months
Public <b>Surface</b> Water Supplies (Class A & Class B)	100'	Mechanical Only	None
	100'-400'	Recommended Herbicides	24 months
Tributary to Class A Water Source, within 400' upstream of water source	100'	Mechanical Only	None
	100'-400'	Recommended Herbicides	24 months
Tributary to Class A Water Source, greater than 400' upstream of water source	10'	Mechanical Only	None
	10'-200'	Recommended Herbicides	24 months
Class B Drinking Water Intake, within 400' upstream of intake	100'	Mechanical Only	None
	100'-200'	Recommended Herbicides	24 months
Private Drinking Water Supplies	50'	Mechanical Only	None
	50'-100'	Recommended Herbicides	24 months
Surface Waters	10'	Mechanical Only	None
	10'-100'	Recommended Herbicides	12 months
Rivers	10' from mean annual high water line	Mechanical Only	None
	10'-200'	Recommended Herbicides	12 months
Wetlands	100' (treatment in wetlands permitted up to 10' of standing water)* <sup>†</sup>	Low-pressure Foliar, CST, Basal Recommended Herbicides	12 months
Inhabited Areas	100'	Recommended Herbicides	12 months
Agricultural Area (Crops, Fruits, Pastures)	100'	Recommended Herbicides	12 months
Certified Vernal Pools	10'	Mechanical Only when water is present	None
Certified Vernal Pool Habitat	10'-outer boundary of habitat	No treatment without written approval per 321 CMR 10.14(12)	
Priority Habitat	No treatment without written approval per 321 CMR 10.14(12)		

Restrictions "24 Months": A minimum of twenty-four months shall elapse between applications

"12 Months": A minimum of twelve months shall elapse between applications

\*Massachusetts recommended herbicides for sensitive sites

<sup>†</sup>Per "DFA Decision Concerning the Wetlands Impact Study"

***Wetlands***

Pursuant to 333 CMR 11.04 (4) (c) (2), based upon the results of two ROW, Wetland impact studies, the Massachusetts Department of Agriculture in consultation with the Massachusetts Department of Environmental Protection and the VMP Advisory Panel, made a determination that herbicides, when used under the guidance of an IVM program and other conditions as set forth in the determination, have less impact on wetlands than mechanical only techniques. Therefore in accordance with the conditions of the Department's determination, Tennessee will selectively apply herbicides to wetland sites, except within ten feet of standing and flowing water and to conifers which will be cut.

### ***Public and Private Water Supplies***

Appropriate sources and references will be consulted to determine the location of public and private water supplies. Tennessee's permanent records and YOP maps will include all known public and private water supplies at the time of printing. The information used by contractors will be updated as necessary during the treatment cycle.

Under 333 CMR 11.01(3), Tennessee requests that during the notification processes and during the treatment cycle, that public and municipal agencies share information on unidentified or new public and private water supplies.

Landowners are encouraged to post signs on the edge of the ROW to help identify private water supplies ( the no-spray treatment area is fifty feet from a private well).

### ***Massachusetts Endangered Species Act***

To comply with 321 CMR 10.14, Massachusetts Endangered Species Act Regulations, Part II Exemptions and 333 CMR 11.04(3)(a-c), Tennessee will submit this YOP to the NHESP. Under the approval process, details about state-listed species that might be affected by our activities and management recommendations are shared with Tennessee under strict confidentiality agreements. Using this data and best management practices, Tennessee and contract personnel will follow the appropriate vegetation management treatment methods within these *sensitive areas*.

To identify Priority Habitats, Tennessee personnel, NHESP approved review botanists and vegetation management crews must use proper identification procedures. Contractors are, therefore, required to train their personnel to recognize the location of state-listed species.

## SECTION 9: 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). Tennessee contracts with independent, professional, certified herbicide applicators that are responsible for the containment, clean up and reporting of chemical spills or accidents. However, this section is a guide to the items that *shall be* available to the treatment crew in the event of a chemical spill or emergency:

### *Types of Chemical Spills that Require Action*

Chemicals include, but are not limited to the following:

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

### *Required Spill Response Equipment*

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

- YOP with Emergency Contact List
- Material Safety Data Sheets(MSDS)
- Product Label
- Product Fact Sheets (when applicable)
- Appropriate absorbent material
- Shovel
- Broom
- Flagging
- Leak Proof Container
- Heavy-duty Plastic Bags

### *Personal Contact*

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

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

### *Clean-up Procedures*

Education and attention will constantly be directed at accident and spill prevention, however, in the event of an unfortunate incident, a spill response check list as a guide that will be included in the YOP's.

*Reference Tables (information subject to change as necessary)*

**Table 8: Herbicide Manufacturers**

MANUFACTURER	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
BASF Corporation	(800) 832-4357	
Dow Agro Sciences	(800) 992-5994	
E.I. du Pont de Nemours and Co.	(800) 441-3637	Medical Emergencies
Monsanto	(314) 694-4000	
NuFarm	(877) 325-1840	Medical Emergencies

**Table 9: State Agencies**

STATE AGENCY	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
MDAR, Pesticide Bureau	(617) 626-1700	A.S.A.P. (within 48 hours)
Massachusetts Department of Environmental Protection, Emergency Response Section	Main Office: (888) 304-1133	For emergencies involving reportable quantities of hazardous materials, call within 2 hours.  Required info: City/town, street address, site name (if applicable), material, quantity released, environment impacted
	Southeast Region: (508) 946-2700	
	Northeast Region: (978) 694-3200	
	Central Region: (508) 792-7650	
	Western Region: (413) 784-1100	
Massachusetts Poison Information Centers	800-682-9211	For medical emergencies involving suspected or known pesticide poisoning symptoms

**Table 10: Emergency Services**

EMERGENCY SERVICE	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
Massachusetts State Police	(508) 820-2121	Framingham, after hours number
Local Police/Fire Dept.	911	
ChemTrec	(800) 424-9300	
Clean Harbors	(800) OIL-TANK	
Pesticide Hotline	(800) 858-7378	PST: 6:30 am-4:30 pm, web: <a href="http://www.NPIC.orst.edu">www.NPIC.orst.edu</a>

**Table 11: Tennessee's contact in the case of a spill or accident**

Steve Morawski, (860) 763-6012
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***Herbicide Spill Procedure***

**REPORTABLE SPILLS (Spills of reportable quantity of material): FOLLOW STEPS 1-10**

**NON-REPORTABLE SPILLS: FOLLOW STEPS 1, 2, 3, 4, 7, 8 & 9 and contact the Tennessee representative.**

**Table 12: Herbicide Spill Check List**

Order	ACTION	Done (√)
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 Mass. DEP and MDAR:	
	MDAR, Pesticide Bureau	(617) 626-1700
	Massachusetts Department of Environmental Protection, Division of Hazardous Waste	Main Office: (888) 304-1133
		Southeast Region: (508) 946-2700
		Northeast Region: (978) 694-3200
		Central Region: (508) 792-7650
	Western Region: (413) 784-1100	
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
	Tennessee Representative: Steve Morawski	(860) 763-6012
	Product manufacturer(s)	
	1	1
	2	2
	3	3
	Chemtrec	(800) 424-9300
	additional emergency personnel	
	If there is a doubt as to who should be notified, contact local State Police Barracks: FILL IN	
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	

**Table 13: Local Emergency Numbers:**

**Emergencies Services for All Municipalities: 911**

Town	Board of Health	Town	Board of Health
Adams	413-743-8330	Lynnfield	781-334-9481
Agawam	413-786-8721	Malden	781-397-7049
Arlington	781-316-3170	Marlboro	508-460-3751
Billerica	978-671-0931	Melrose	781-979-4130
Bolton	978-779-3301	Monson	413-267-4107
Burlington	781-270-1955	Monterey	413-588-4667
Charlton	508-248-2210	North Adams	413-662-3020
Cheshire	413-743-1690	Northampton	413-587-1214
Clinton	978-365-4116	Otis	413-269-0100
Danvers	978-777-0001	Peabody	978-538-5926
Dracut	978-453-8162	Pittsfield	413-499-9411
East Longmeadow	413-525-5400	Reading	781-942-9061
Easthampton	413-529-1430	Revere	781-286-8176
Essex	978-768-7614	Richmond	413-698-3355
Everett	617-394-2255	Sandisfield	413-258-4615
Framingham	508-532-5470	Saugus	781-231-4115
Gloucester	978-281-9771	Southampton	413-529-1003
Granville	413-357-8585	Southwick	413-569-1212
Hamilton	978-468-5579	Stockbridge	413-298-4170
Hampden	413-566-2152	Sturbridge	508-347-2504
Holland	413-245-7108	Tewksbury	978-640-4470
Holyoke	413-322-5596	Tolland	413-258-4794
Hudson	978-568-9625	Tyringham	413-243-1749
Lancaster	978-772-3335	Wales	413-245-4137
Lanesborough	413-442-1167	Wenham	978-468-5520
Lee	413-243-5550	Westfield	413-572-6210
Leominster	978-534-7533	Wilmington	978-658-4298
Longmeadow	413-565-4140	Winchester	781-721-7121
Lunenburg	978-582-4135	Woburn	781-897-5920
Lynn	781-598-4000		