

***MassDOT***  
**DISTRICT**  
**1**

**YEARLY OPERATIONAL PLAN**

**2016**

## Contents

PROGRAM PURPOSE.....	1
Individual Supervising the Yearly Operational Plan (YOP).....	2
Contractor/Personnel Performing the Herbicide Treatments .....	2
METHODS.....	3
Target Vegetation .....	3
Mechanical Vegetation Management Techniques .....	3
Herbicide Application Methods .....	3
Rights-of-Way Sensitive Area Materials .....	3
Tables 1-4- Materials and Rates of Application.....	4
Sensitive Areas .....	5
Methods used to Delineate Sensitive Areas .....	5
Table 5 - Sensitive Area Restriction Guide (333 CMR 11.04) .....	6
Herbicide Handling, Mixing and Loading Procedures.....	7
Emergency Information and Points of Contact.....	8
SCOPE OF WORK.....	9
APPENDIX A – ENVIRONMENTAL MONITOR NOTICE.....	10
APPENDIX B – SENSITIVE MATERIALS LIST .....	13
APPENDIX C – VEGETATION MANAGEMENT PLAN .....	15
APPENDIX D – SPRAY LOCUS & LOCATION MAPS.....	16

## **PROGRAM PURPOSE**

In general, the purpose of the MassDOT Vegetation Management Program is to implement an Integrated Vegetation Management plan that eliminates problem vegetation under guardrail, along barriers, cracks and curbing, bridge abutments, sign supports, and other highway appurtenances to allow for safe access and visibility for pedestrians, traffic, and MassDOT workers as well as to preserve the integrity of the roadway. The goal is to choose the appropriate control techniques for the targeted vegetation while keeping herbicide use to a minimum.

MassDOT Highway Division intends to file this Yearly Operational Plan for District 1 under the Massachusetts Highway Department 2012-2016 Vegetation Management Plan.

This Yearly Operational Plan for MassDOT roadways in District 1 will be for the treatment of problematic vegetation along I-90 in locations shown on the maps.

**Individual Supervising the Yearly Operational Plan (YOP)**

The individual supervising the implementation and conditions of the YOP is:

Name and Title     George Batchelor, Supervisor of Landscape Design  
Department        **MassDOT**, Highway Division  
Address             10 Park Plaza, Boston, MA 02116  
Phone Number     (857) 368-9180

**Contractor/Personnel Performing the Herbicide Treatments**

As required by law, applicators to roadside rights-of-way must hold a valid license from the Massachusetts Department of Agricultural Resources.

**Northern Tree Service**

Philip Cambo  
P.O. Box 790  
Palmer, MA 01069  
Phone: 800-232-6132

**Vegetation Control Services, Inc.**

Harry Williston  
2342 Main Street  
Athol, MA 01331  
Phone: 800-323-7706

**D'Angelo Brothers**

Paul Capachione  
100 N. Conahan Drive  
Hazelton, PA 18209  
Phone: 207-322-3350

**Mayer Tree Service**

Dan McCarthy  
9 Scots Way  
Essex, MA 01929  
Phone: 978- 500-1297

## **METHODS**

### **Target Vegetation**

In general, as defined in the MassDOT 2012-2016 Vegetation Management Plan, target vegetation along roadways falls into one or more of the following categories: Hazard Vegetation, Detrimental Vegetation, Nuisance Vegetation, and Invasive Vegetation. Such vegetation may include herbaceous species, shrubs, vines, and trees. With the exception of spraying vegetation on or along guardrail, median, curb, or other structures in locations shown in the 2016 YOP Maps, all vegetation management on MassDOT roads will be by mechanical methods.

### **Mechanical Vegetation Management Techniques**

Most of MassDOT's vegetation management is by mechanical methods, and these include mowing and line trimming of herbaceous material, tree trimming and removals, and brush cutting.

### **Herbicide Application Methods**

MassDOT will primarily utilize foliar spray for all guardrail, curb and barrier treatment. Cut stem/stump methods may be used for instances where selective treatment is desired, such as to treat re-sprouting trees, shrubs or vines. Selective treatment is more effective, is a reduced volume of herbicide and protects adjacent desirable vegetation.

Foliar treatments involve the selective application of approved herbicides and adjuvants diluted in water, to the foliage and stems of the target vegetation. Low-pressure nozzles will be used to produce the largest possible droplet size and a drift control agent shall be added at the rate recommended on the label to keep spray drift to an absolute minimum. The herbicide solution is applied to lightly wet the target plant.

Cut stump or cut stem treatment shall be with a portable pressurized canister or manually painted on the freshly cut surface of the remaining stump.

Foliar applications will take place when plants are in full leaf and actively growing and in accordance with the manufacturer's recommendations.

MassDOT will use only those chemicals listed within the Sensitive Areas Materials List, with the Use Restrictions shown for Sensitive Areas, and with the label restrictions for all other areas.

### **Rights-of-Way Sensitive Area Materials**

The Massachusetts Department of Agricultural Resources (Pesticide Bureau) approves materials for use within Sensitive Areas within rights-of-ways. These materials are listed in Appendix B. Materials to be used for MassDOT application are listed in Table 1-5.

**Tables 1-4- Materials and Rates of Application**

<b>Table 1 - Tank Mix for Curb, Cracks, Guardrails, Median Treatments (General Weed Control)</b>			
<b>Herbicides &amp; Adjuvants</b>	<b>Active Ingredient</b>	<b>EPA Registration Numbers</b>	<b>Mix Concentration (per 100 gals. Water)</b>
Rodeo	Glyphosate	62719-324	2-5%
Oust Extra	Sulfometuron Methyl and Metsulfuron-Methyl	352-622	10 oz (applied at a volume of 15-30 gals per acre)
Induce, Clean Cut, or equivalent surfactant			0.125% - 1%
Point Blank, Stay Put Plus or equivalent drift retardant			4-16 oz.

<b>Table 2 - Tank Mix for Poison Ivy, Noxious and Invasive Species</b>			
<b>Herbicides &amp; Adjuvants</b>	<b>Active Ingredient</b>	<b>EPA Registration Numbers</b>	<b>Mix Concentration (per 100 gals. Water)</b>
Rodeo	Glyphosate	62719-324	2-5%
Escort XP	Metsulfuron-Methyl	352-439	1.25-4oz
Induce, Clean Cut, or equivalent surfactant			0.125% - 1%
Point Blank, Stay Put Plus or equivalent drift retardant			4-16 oz.

<b>Table 3 - Tank Mix for Poison Ivy</b>			
<b>Herbicides &amp; Adjuvants</b>	<b>Active Ingredient</b>	<b>EPA Registration Numbers</b>	<b>Mix Concentration (per 100 gals. Water)</b>
Garlon 4 Ultra	Triclopyr	62719-527	2-4%
Induce, Clean Cut, or equivalent surfactant			0.125% - 1%
Point Blank, Stay Put Plus or equivalent drift retardant			4-16 oz.

<b>Table 4 - Tank Mix for Low Volume Foliage Applications (mixed in water)</b>			
<b>Herbicides &amp; Adjuvants</b>	<b>Active Ingredient</b>	<b>EPA Registration Numbers</b>	<b>Mix Concentration (per 100 gals. Water)</b>
Rodeo	Glyphosate	62719-324	3-5%
Krenite	Fosamine	42750-247	6-10%
Escort XP	Metsulfuron-Methyl	352-439	1.25-4oz
Arsenal Powerline	Imazapyr	241-431	0.125%-.5%
Induce, Clean Cut, or equivalent surfactant			0.125% - 1%
Point Blank, Stay Put Plus or equivalent drift retardant			6-64 oz.

<b>Table 5- Tank Mixes for Cut Surface Treatment Applications</b>			
<b>Herbicides &amp; Adjuvants</b>	<b>Active Ingredient</b>	<b>EPA Registration Numbers</b>	<b>Mix Concentration (per 100 gals. Water)</b>
Rodeo	Glyphosate	62719-324	40-50%
Arsenal Powerline	Imazapyr	241-431	3%-5% (mixed with Accord Concentrate)
Carriers: Water or Windshield Washing Fluid			0.125% - 1%

## *Sensitive Areas*

### *Methods used to Delineate Sensitive Areas*

Sensitive Areas are areas within rights-of-way in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects. These areas shall be delineated.

Sensitive areas are separated into two categories: areas that are visible and therefore readily identifiable in the field, and areas that are not visible and therefore not readily identifiable in the field.

Sensitive Areas that are visibly identifiable in the field include surface waters, wetlands, rivers, and agricultural and inhabited areas. Sensitive areas that are not readily identifiable in the field include public groundwater supplies, public surface water supplies, and private water supplies. These locations are derived from MassGIS data provided by the Department of Environmental Protection, Fish and Wildlife, and other state agencies and are shown on the maps.

Steel reflective delineators shall be bolted to the guardrail beam face to mark locations.

For guardrail, curb and barrier spray, the following field markers shall be used in District 1:

NO-SPRAY limits shall be indicated using RED flags attached to the guardrail at the beginning of the limits.

SPRAY limits shall be indicated using GREEN flags attached to the guardrail at the beginning of the limits.

**Table 5 - Sensitive Area Restriction Guide (333 CMR 11.04)**

<b>SENSITIVE AREA</b>	<b>NO-SPRAY AREA</b>	<b>LIMITED USE AREA</b>	<b>WHERE IDENTIFIED</b>
Wetlands and Water over Wetlands	Within 10 feet.	10 - 100 feet: 12 months must elapse between applications and herbicides are applied selectively by low pressure foliar techniques or by cut-stump applications.	YOP Maps and identify on site
Certified Vernal Pool	Within 10 feet.	10 feet to the outer boundary of any Certified Vernal Pool Habitat; 12 months must elapse between application; Selective low pressure, using foliar techniques or basal or cut-stump applications.	YOP Maps and identify on site
Public Ground Water Supply	Within 400 feet (Zone I)	Zone II or IWPA (Primary Recharge Area): 24 months must elapse between applications; applications shall be selective low pressure foliar techniques, basal or cut-stump.	YOP Maps and identify on site
Riverfront Areas	Within 10 feet from mean annual high water line.	10 feet from the mean annual high water line and the outer boundary of the Riverfront Area: 12 months must elapse between applications; applications shall be selective low pressure foliar, basal or cut- stump.	YOP Maps and Identify on site
Agricultural & Inhabited Areas	N/A	0 - 100 feet: 12 months must elapse between application; application shall be selective low pressure foliar, basal or cut-stump.	Identify on site.
State Listed Species Habitat	No application within habitat area except in accordance with a Yearly Operational Plan approved in writing by the Massachusetts Department of Fish and Game.		YOP Maps
Private Water Supply	Within 50 feet	50 – 100 feet 24 months must elapse between applications; applications shall be selective low pressure foliar techniques, basal or cut- stump.	In YOP & well list and identify on site.
Public Surface Water Supply	Within 100 feet of any Class A public surface water source.	100 feet to the outer boundary of the Zone A; 24 months must elapse between applications; applications shall be selective low pressure foliar techniques, basal or cut-stump.	YOP Maps
	Within 10 feet of any tributary or associated surface water body located outside of the Zone A	10 feet to the outer boundary of the Zone A; 24 months must elapse between applications; applications shall be selective low pressure foliar techniques, basal or cut- stump.	YOP Maps
	Within 10 feet of any tributary or associated surface water body located outside of the Zone A	10 feet to the outer boundary of the Zone A; 24 months must elapse between applications; applications shall be selective low pressure foliar techniques, basal or cut- stump.	YOP Maps

## **Herbicide Handling, Mixing and Loading Procedures**

All mixing and loading of herbicides will occur at the storage facility in amounts of herbicide necessary to carry out that day's work. This will minimize waste and the need of excess handling. The spray vehicle will be equipped with a clipboard log of the herbicides on board, a bag of adsorbent, activated charcoal, plastic bats, a broom and a shovel in case of a minor spill.

Major Spills and Related Accidents - For the purpose of this VMP, major spills involve reportable quantities of hazardous materials as defined by the Department of Environmental Protection (DEP) 320 CMR 40.000. Related accidents include fire, poisoning and automobile accidents.

- a) Administer proper first aid and call an ambulance and/or Massachusetts Poison Information Center in cases involving injury due to poisoning.
- b) Call the police and/or fire department in cases involving automobile accidents or fire. c) If possible, control the spill by stopping the leak or source of spill.
- d) Confine the spread of liquids with a dike composed of soil or other absorptive materials.
- e) Call ChemTrec, Massachusetts Pesticide Bureau or chemical manufacturer for assistance (see phone listing below) if unable to handle the spill or the material is unfamiliar.
- f) Notify the DEP if water bodies are contaminated, and for releases or threatened releases of reportable quantities of hazardous material.
- g) Notify the District Hazardous Material Coordinator. h) Clean up spill:
  - 1) If the spill occurs in a public location, isolate the spill areas and deny unauthorized entry until cleanup is complete.
  - 2) Absorb spilled liquids with sand, absorptive clay, spill control gel, vermiculite, pet litter, sawdust or other absorptive material. Wear proper protective clothing and equipment.
  - 3) Sweep or shovel contaminated absorbent into a leak proof, sealable container for proper disposal.
  - 4) Dry herbicides, such as dust, granular and pellets can be directly swept or shoveled into leak proof sealable containers without absorptive materials.
  - 5) Neutralize contaminated area with hydrated lime, sodium hypochlorite (bleach), or soapy water. Never mix bleach and ammonia base products or a poisonous gas will result.
  - 6) Dispose of contaminated material at an approved location.

## **Emergency Information and Points of Contact**

In the event of a spill or emergency, information on safety precautions and clean up procedures may be gathered from the following sources:

Herbicide Label	Container
Herbicide Fact Sheets	Appendix B
Herbicide Manufacturers:	
Dow Agro Sciences-----	(517) 636 4400
EI DuPont-----	(800) 441-3637
Monsanto-----	(314) 694-4000
BASF-----	(800) 832-4357
NuFarm USA.....	(630) 455-2000
MA Department of Agricultural Resources (DAR)	(617) 626-1700
MA Department of Environmental Protection (DEP) Incident Response Unit	1-888-304-1133
MA Department of Environmental Protection – Western Regional Office	(413) 784-1100
ChemTrec	(800) 424-9300
MA Poison Control Center	(800) 682-9211
Environmental Protection Agency Pesticide Hotline	(800) 858-7378
MA Department of Public Health, Bureau of Environmental Health, Environmental Toxicology Program	(617) 624-5757
Massachusetts Department of Transportation	
Boston Headquarters	(617) 973-7500
District 1 Headquarters (Lenox)	(413) 637-5700
District 2 Headquarters (Northampton)	(413) 582-0599
District 3 Headquarters (Worcester)	(508) 929-3800
District 4 Headquarters (Arlington)	(781) 641-8300
District 5 Headquarters (Taunton)	(508) 824-6633

## SCOPE OF WORK

The proposed work for State FY 2016 involves the application of herbicides to control target vegetation along state highways in accordance with the Rights of Way Management regulations (333 CMR 11.00) and the MassDOT District 1 2012-2016 Vegetation Management Plan (VMP). Target vegetation along shall include vegetation affecting roadway structures, particularly guardrail, barriers and curbs, as well as invasive vegetation at selected locations.

MassDOT will treat vegetation detrimental to guardrail, barriers and curbs along I-90 as shown in the maps.

Below is the list of the towns in which spraying will occur in District 1 for 2016.

Maps are shown in Appendix D or available from the District.

<b>Route</b>	<b>Municipalities</b>	<b>Target Vegetation</b>
DISTRICT 1		
I-90	West Stockbridge, Stockbridge, Lee, Becket, Otis, Blandford, Russell	Guardrail/Barrier/Curb

**APPENDIX A – ENVIRONMENTAL MONITOR NOTICE**

**APPENDIX B – SENSITIVE MATERIALS LIST**  
**&**  
**LINKS TO MDAR WEBSITE & LABELS**

**APPENDIX C – VEGETATION MANAGEMENT PLAN**

[District 1 - 2012-2016 VMP](#)

**APPENDIX D – SPRAY LOCUS & LOCATION MAPS**

Maps are available from the Districts upon request