MassDOT
DISTRICT
1
YEARLY OPERATIONAL PLAN
2016
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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 182019  
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

**Table 1 - Tank Mix for Curb, Cracks, Guardrails, Median Treatments**  
*(General Weed Control)*

<table>
<thead>
<tr>
<th>Herbicides &amp; Adjuvants</th>
<th>Active Ingredient</th>
<th>EPA Registration Numbers</th>
<th>Mix Concentration (per 100 gals. Water)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodeo</td>
<td>Glyphosate</td>
<td>62719-324</td>
<td>2-5%</td>
</tr>
<tr>
<td>Oust Extra</td>
<td>Sulfometuron Methyl and Metsulfuron-Methyl</td>
<td>352-622</td>
<td>10 oz (applied at a volume of 15-30 gals per acre)</td>
</tr>
<tr>
<td>Induce, Clean Cut, or equivalent surfactant</td>
<td></td>
<td></td>
<td>0.125% - 1%</td>
</tr>
<tr>
<td>Point Blank, Stay Put Plus or equivalent drift retardant</td>
<td></td>
<td></td>
<td>4-16 oz.</td>
</tr>
</tbody>
</table>

**Table 2 - Tank Mix for Poison Ivy, Noxious and Invasive Species**

<table>
<thead>
<tr>
<th>Herbicides &amp; Adjuvants</th>
<th>Active Ingredient</th>
<th>EPA Registration Numbers</th>
<th>Mix Concentration (per 100 gals. Water)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodeo</td>
<td>Glyphosate</td>
<td>62719-324</td>
<td>2-5%</td>
</tr>
<tr>
<td>Escort XP</td>
<td>Metsulfuron-Methyl</td>
<td>352-439</td>
<td>1.25-4 oz</td>
</tr>
<tr>
<td>Induce, Clean Cut, or equivalent surfactant</td>
<td></td>
<td></td>
<td>0.125% - 1%</td>
</tr>
<tr>
<td>Point Blank, Stay Put Plus or equivalent drift retardant</td>
<td></td>
<td></td>
<td>4-16 oz.</td>
</tr>
</tbody>
</table>

**Table 3 - Tank Mix for Poison Ivy**

<table>
<thead>
<tr>
<th>Herbicides &amp; Adjuvants</th>
<th>Active Ingredient</th>
<th>EPA Registration Numbers</th>
<th>Mix Concentration (per 100 gals. Water)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garlon 4 Ultra</td>
<td>Triclopyr</td>
<td>62719-527</td>
<td>2-4%</td>
</tr>
<tr>
<td>Induce, Clean Cut, or equivalent surfactant</td>
<td></td>
<td></td>
<td>0.125% - 1%</td>
</tr>
<tr>
<td>Point Blank, Stay Put Plus or equivalent drift retardant</td>
<td></td>
<td></td>
<td>4-16 oz.</td>
</tr>
</tbody>
</table>

**Table 4 - Tank Mix for Low Volume Foliage Applications (mixed in water)**

<table>
<thead>
<tr>
<th>Herbicides &amp; Adjuvants</th>
<th>Active Ingredient</th>
<th>EPA Registration Numbers</th>
<th>Mix Concentration (per 100 gals. Water)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodeo</td>
<td>Glyphosate</td>
<td>62719-324</td>
<td>3-5%</td>
</tr>
<tr>
<td>Krenite</td>
<td>Fosamine</td>
<td>42750-247</td>
<td>6-10%</td>
</tr>
<tr>
<td>Escort XP</td>
<td>Metsulfuron-Methyl</td>
<td>352-439</td>
<td>1.25-4 oz</td>
</tr>
<tr>
<td>Arsenal Powerline</td>
<td>Imazapyr</td>
<td>241-431</td>
<td>0.125% - 1%</td>
</tr>
<tr>
<td>Induce, Clean Cut, or equivalent surfactant</td>
<td></td>
<td></td>
<td>0.125% - 1%</td>
</tr>
<tr>
<td>Point Blank, Stay Put Plus or equivalent drift retardant</td>
<td></td>
<td></td>
<td>6-64 oz.</td>
</tr>
</tbody>
</table>

**Table 5 – Tank Mixes for Cut Surface Treatment Applications**

<table>
<thead>
<tr>
<th>Herbicides &amp; Adjuvants</th>
<th>Active Ingredient</th>
<th>EPA Registration Numbers</th>
<th>Mix Concentration (per 100 gals. Water)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodeo</td>
<td>Glyphosate</td>
<td>62719-324</td>
<td>40-50%</td>
</tr>
<tr>
<td>Arsenal Powerline</td>
<td>Imazapyr</td>
<td>241-431</td>
<td>3%-5% (mixed with Accord Concentrate)</td>
</tr>
<tr>
<td>Carriers: Water or Windshield Washing Fluid</td>
<td></td>
<td></td>
<td>0.125% - 1%</td>
</tr>
</tbody>
</table>
**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)

<table>
<thead>
<tr>
<th>SENSITIVE AREA</th>
<th>NO-SPRAY AREA</th>
<th>LIMITED USE AREA</th>
<th>WHERE IDENTIFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetlands and Water over Wetlands</td>
<td>Within 10 feet.</td>
<td>10 - 100 feet: 12 months must elapse between applications and herbicides are applied selectively by low pressure foliar techniques or by cut-stump applications.</td>
<td>YOP Maps and identify on site</td>
</tr>
<tr>
<td>Certified Vernal Pool</td>
<td>Within 10 feet.</td>
<td>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.</td>
<td>YOP Maps and identify on site</td>
</tr>
<tr>
<td>Public Ground Water Supply</td>
<td>Within 400 feet (Zone 1)</td>
<td>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.</td>
<td>YOP Maps and identify on site</td>
</tr>
<tr>
<td>Riverfront Areas</td>
<td>Within 10 feet from mean annual high water line.</td>
<td>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.</td>
<td>YOP Maps and Identify on site</td>
</tr>
<tr>
<td>Agricultural &amp; Inhabited Areas</td>
<td>N/A</td>
<td>0 - 100 feet: 12 months must elapse between application; application shall be selective low pressure foliar, basal or cut-stump.</td>
<td>Identify on site.</td>
</tr>
<tr>
<td>State Listed Species Habitat</td>
<td>No application within habitat area except in accordance with a Yearly Operational Plan approved in writing by the Massachusetts Department of Fish and Game.</td>
<td></td>
<td>YOP Maps</td>
</tr>
<tr>
<td>Private Water Supply</td>
<td>Within 50 feet</td>
<td>50 – 100 feet 24 months must elapse between applications; applications shall be selective low pressure foliar techniques, basal or cut-stump.</td>
<td>In YOP &amp; well list and identify on site.</td>
</tr>
<tr>
<td>Public Surface Water Supply</td>
<td>Within 100 feet of any Class A public surface water source.</td>
<td>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.</td>
<td>YOP Maps</td>
</tr>
<tr>
<td>Public Surface Water Supply</td>
<td>Within 10 feet of any tributary or associated surface water body located outside of the Zone A</td>
<td>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.</td>
<td>YOP Maps</td>
</tr>
<tr>
<td>Public Surface Water Supply</td>
<td>Within 10 feet of any tributary or associated surface water body located outside of the Zone A</td>
<td>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.</td>
<td>YOP Maps</td>
</tr>
</tbody>
</table>
**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
El 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.

<table>
<thead>
<tr>
<th>Route</th>
<th>Municipalities</th>
<th>Target Vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-90</td>
<td>West Stockbridge, Stockbridge,</td>
<td>Guardrail/Barrier/Curb</td>
</tr>
<tr>
<td></td>
<td>Lee, Becket, Otis, Blandford,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Russell</td>
<td></td>
</tr>
</tbody>
</table>

DISTRICT 1
APPENDIX A – ENVIRONMENTAL MONITOR NOTICE
Pursuant to the provisions of the Rights of Way Management Regulations, 333 CMR 11:00, in order to apply herbicides to control vegetation along rights of way, a 5 year Vegetation Management Plan (VMP) and a Yearly Operational Plan (YOP) must be approved by the (DAR) Department of Agricultural Resources. Therefore, notice of receipt of a YOP and procedures for public review is hereby given as required by Section 11.06 (3).

A Yearly Operational Plan (YOP) has been submitted for: MassDOT- Highway Division. This plan has been prepared by and submitted to the Department by:

George Batchelor, Supervisor of Landscape Design
MassDOT - Highway Division
10 Park Plaza
Boston, MA 02116

Areas identified in the YOP as locations where treatment of Rights of Way with herbicides will be carried out in calendar year 2016 are:

<table>
<thead>
<tr>
<th>Route</th>
<th>Municipalities</th>
<th>Target Vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-90</td>
<td>West Stockbridge, Stockbridge, Lee, Becket, Otis, Blandford, Russell</td>
<td>Guardrail/Barrier/Curb</td>
</tr>
</tbody>
</table>

**Public Review**

The Department of Agricultural Resources (DAR) in particular seeks the verification of sensitive area locations reported in the Yearly Operational Plan (YOP). The Department itself has a limited ability to survey the geography, land use, and the water supplies in all the communities through which the rights of way are located. Municipalities, however, have most of this information readily available, and the particular knowledge with which to better certify the sensitive areas in their communities. Therefore, the Department requests, and urges, the assistance of the "affected" municipality in reviewing the completeness and accuracy of the maps contained in the submitted document. The DAR has established the following procedures for this review.

Yearly Operational Plans (YOP) and a copy of this notice will be sent by the applicant to the Conservation Commission, Board of Health (or designated health agent), and to the head of government (Mayor, City Manager, Chair of the Board of Selectmen) of the municipality where herbicides are to be applied along the rights of way during the calendar year 2016. Municipal agencies and officials will have forty-five (45) days following receipt of the YOP to review the maps contained in the document that indicate the location of "sensitive areas not readily identifiable in the field" for inaccuracies and omissions. "Sensitive areas" will be defined as in Section 11.02 a-f.

The YOP may be viewed on DAR’s website: [http://www.mass.gov/agr](http://www.mass.gov/agr)

Municipal agencies and officials are requested to forward the YOP to other appropriate official(s) in their municipality qualified to certify the accuracy of sensitive area locations as indicated on the maps. The maps should be "corrected" and returned to the applicant, also a copy of the maps with these corrections indicated should be sent to the DAR to the address listed below, within the forty-five day review period. If the city or town needs more time to carry out this review, it should send a written request for an extension to the DAR and cite why there is a "good cause" for requesting additional time.
All corrections will be required to be made by the applicant, and corrected maps sent back to the city/town before the YOP can be considered "approved" by the Department for vegetation maintenance in that municipality. Any dispute on the part of the applicant regarding corrections made by municipal authorities should be indicated in writing to the Department and to the city/town which requested the disputed changes within (15) fifteen days of receipt of the request. The Department will decide whether or not YOP should be approved with or without the requested changes. The DAR will consider the "final approval" of a YOP individually for the municipality.

The final (21) twenty-one days of the public review period can serve concurrently to provide public notification as required by section 11.07 of the Rights of Way Management regulations, if the applicant has an approved VMP and if all the requisite city/town offices which have received copies of the YOP have completed their review and corrections have been duly made by the applicant and approved by the Department.

A failure by the city/town to respond to the applicant's submission of the YOP within the forty-five day public review period will be considered by the DAR to indicate agreement by municipal officials with the sensitive area demarcations as provided by the applicant in their YOP.

Any questions or comments on the information provided in this Notice and the procedures established for the municipal review as outlined above, should be addressed to:

Michael W. McClean  
Right of Way Program  
Massachusetts Department of Agricultural Resources  
Pesticide Bureau  
251 Causeway Street, Suite 500  
Boston, Massachusetts 02114

Any additional questions or comments on any information provided as part of the proposed YOP should be addressed in writing to:

George Batchelor, Supervisor of Landscape Design  
MassDOT - Highway Department  
10 Park Plaza  
Boston, MA 02116

A copy should be sent to the Right of Way program at the above address.

**COMMENT PERIOD ENDS AT THE CLOSE OF BUSINESS, Friday, May 20, 2016**
APPENDIX B – SENSITIVE MATERIALS LIST

&

LINKS TO MDAR WEBSITE & LABELS
Rights of Way Sensitive Area Materials List

<table>
<thead>
<tr>
<th>Active Ingredient</th>
<th>Product Names (EPA #)</th>
<th>Registrant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Glyphosate</strong></td>
<td><strong>Round Up Pro (524-475)</strong> &lt;br&gt; Monsanto &lt;br&gt; <strong>Aquaneat Aquatic Herbicide (228-365)</strong> &lt;br&gt; <strong>Razor (228-366)</strong> &lt;br&gt; <strong>Razor-Pro (228-366)</strong> &lt;br&gt; Nu Farm Americas</td>
<td><strong>Glypro-Plus (62719-322)</strong> &lt;br&gt; <strong>Accord Concentrate or Rodeo (62719-324)</strong> &lt;br&gt; Dow AgroSciences</td>
</tr>
<tr>
<td>Lowest Labeled Rate for all Glyphosate products</td>
<td>While Accord Concentrate, Rodeo, Glyphosate VMF and Aquaneat all have aquatic uses, approval for their use as sensitive materials does NOT mean that they can be used for aquatic weed control, or directly applied to water, as part of a rights of way management program. Products are subject to the no-spray and limited spray provisions of 333 CMR 11.04.</td>
<td></td>
</tr>
<tr>
<td><strong>Metsulfuron Methyl</strong></td>
<td><strong>Escort XP (352-439)</strong> &lt;br&gt; EI Dupont &lt;br&gt; <strong>Patriot Selective Herbicide, (228-391)</strong> &lt;br&gt; Nu Farm Americas</td>
<td><strong>Spyder Selective Herbicide (228-408)</strong> &lt;br&gt; Nu Farm Americas</td>
</tr>
<tr>
<td>Lowest Labeled Rate for all Metsulfuron Methyl Products*</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sulfometuron Methyl</strong></td>
<td><strong>Oust XP (352-601)</strong> &lt;br&gt; EI Dupont &lt;br&gt; <strong>Spyder Selective Herbicide (228-408)</strong> &lt;br&gt; Nu Farm Americas</td>
<td><strong>Spyder Selective Herbicide (228-408)</strong> &lt;br&gt; Nu Farm Americas</td>
</tr>
<tr>
<td>Lowest Labeled Rate for all Sulfometuron-Methyl Products*</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Metsulfuron Methyl</strong></td>
<td><strong>Oust Extra (352-622)</strong> &lt;br&gt; EI Dupont</td>
<td><strong>Krenite S (42750-247)</strong> &lt;br&gt; Albaugh, Inc.</td>
</tr>
<tr>
<td>SulfoMeturon Methyl</td>
<td><strong>Oust Extra (352-622)</strong> &lt;br&gt; EI Dupont</td>
<td><strong>Krenite S (42750-247)</strong> &lt;br&gt; Albaugh, Inc.</td>
</tr>
<tr>
<td>Lowest Labeled Rate*</td>
<td><strong>Krenite S (352-395)</strong> &lt;br&gt; EI Dupont</td>
<td><strong>Krenite S (42750-247)</strong> &lt;br&gt; Albaugh, Inc.</td>
</tr>
<tr>
<td><strong>Ammonium Salt of Fosamine</strong></td>
<td><strong>Krenite S (352-395)</strong> &lt;br&gt; EI Dupont</td>
<td><strong>Krenite S (42750-247)</strong> &lt;br&gt; Albaugh, Inc.</td>
</tr>
<tr>
<td><strong>Imazapyr</strong></td>
<td><strong>Arsenal (241-346)</strong> &lt;br&gt; <strong>Arsenal Powerline (241-431)</strong> &lt;br&gt; <strong>Arsenal Railroad Herbicide (241-273)</strong> &lt;br&gt; BASF</td>
<td><strong>Polaris AC Complete Herbicide (228-570)</strong> &lt;br&gt; (Product Review) &lt;br&gt; <strong>Polaris Herbicide (228-534)</strong> &lt;br&gt; Nu Farm Americas</td>
</tr>
<tr>
<td>3 pints/acre every 3rd year OR 2 pints/acre every other year for all Imazapyr Products</td>
<td></td>
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<tr>
<td><strong>Triclopyr, Butoxy Ethyl Ester</strong></td>
<td><strong>Garlon 4 (62719-40)</strong> &lt;br&gt; Dow AgroSciences &lt;br&gt; <strong>Garlon 4 Ultra (62719-527)</strong> &lt;br&gt; Dow AgroSciences</td>
<td><strong>Polaris AC Complete Herbicide (228-570)</strong> &lt;br&gt; (Product Review) &lt;br&gt; <strong>Polaris Herbicide (228-534)</strong> &lt;br&gt; Nu Farm Americas</td>
</tr>
<tr>
<td>The lowest of the following rates:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Between 10 feet and 50 feet of the resource: Lowest labeled rate* or 0.5 pints per acre</td>
<td><strong>Garlon 4 (62719-40)</strong> &lt;br&gt; Dow AgroSciences &lt;br&gt; <strong>Garlon 4 Ultra (62719-527)</strong> &lt;br&gt; Dow AgroSciences</td>
<td><strong>Polaris AC Complete Herbicide (228-570)</strong> &lt;br&gt; (Product Review) &lt;br&gt; <strong>Polaris Herbicide (228-534)</strong> &lt;br&gt; Nu Farm Americas</td>
</tr>
<tr>
<td>2. Between 50 feet and the boundary of the limited spray zone: Lowest labeled rate* or 3 pints per acre</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Paclobutrazol</strong></td>
<td><strong>Cambistat (74779-3)</strong> &lt;br&gt; Rainbow Tree care</td>
<td><strong>Polaris Herbicide (228-534)</strong> &lt;br&gt; Nu Farm Americas</td>
</tr>
<tr>
<td>Lowest Labeled Rate*</td>
<td><strong>Cambistat (74779-3)</strong> &lt;br&gt; Rainbow Tree care</td>
<td><strong>Polaris Herbicide (228-534)</strong> &lt;br&gt; Nu Farm Americas</td>
</tr>
</tbody>
</table>

*Lowest labeled rate* the minimum labeled rate of the pesticide product for the appropriate site, pest and application method

**Disclaimer**

The Massachusetts Department of Agricultural Resources (MDAR) makes no endorsement of any companies, organizations, persons, products, trade or brand names referenced in this Rights of Way Sensitive Area Materials List (“the list”). Active Ingredients on the list are reviewed pursuant to a Cooperative Agreement between MDAR and the Massachusetts Department of Environmental Protection. Only environmental fate and toxicological data, including eco-toxicological data, are reviewed when evaluating an active ingredients suitability for inclusion on the list. Inclusion on the list does not represent any endorsement by MDAR as to the efficacy of the active ingredient for rights-of-way vegetation management.
APPENDIX C – VEGETATION MANAGEMENT PLAN

District 1 - 2012-2016 VMP
APPENDIX D – SPRAY LOCUS & LOCATION MAPS

Maps are available from the Districts upon request