

# Yearly Operational Plan

2023

---

## MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RAPID TRANSIT LINES

21 Arlington Ave  
Charlestown, MA  
02129

---

Prepared by:

CW Layton Consultants  
78 South Main Street  
New Salem, MA 01355  
978-544-7892

### **ABSTRACT:**

This Yearly Operational Plan (YOP) describes the vegetation management operations for the Railroad's rights-of-way scheduled for vegetation maintenance during this calendar year in compliance with the Commonwealth of Massachusetts Rights-of-Way Management Regulations 333 CMR 11.00.

This YOP is a companion document to the Vegetation Management Plan (VMP) which has been approved by the Department of Agricultural Resources.

## INTRODUCTION

Both Federal and State laws require railroads to manage vegetation to help insure the safe passage of people, material, and goods.

The Code of Federal Regulations mandates the safety of the railroad must be guaranteed by regular inspection and maintenance. Vegetation must be controlled so that it does not become a fire hazard, does not interfere with visibility, or impede direct visual inspections of the track structure. Vegetation must also be managed to allow for proper drainage of the track and ballast structure, to prevent tree and branch damage to cargo, and to provide safe footing and working conditions for trackside personnel. Vegetation growing alongside the rails can prevent effective and adequate braking, especially in emergency situations.

The purpose of 333 CMR 11.00, Rights of Way Management, is to promote the implementation of Integrated Pest Management techniques and to establish standards, requirements, and procedures necessary to minimize the risk of unreasonable adverse effects on human health and the environment associated with the use of herbicides to maintain rights-of-way. These regulations establish procedures which guarantee ample opportunity for public and municipal agency review and input on rights-of-way maintenance plans.

A Yearly Operational Plan or YOP must be submitted to the Department of Agricultural Resources every year herbicides are intended for use to maintain rights-of-way. The YOP provides a detailed program for vegetation management for the year. This YOP is a companion document to the Vegetation Management Plan (VMP) approved by the Department. The VMP is the long-term management plan for the railroad which describes the intended program for vegetation control over a five-year period.

Upon receipt of this YOP, the Department publishes a notice in the Environmental Monitor. The applicant has provided a copy of the YOP and Environmental Monitor notice to the Board of Health, Conservation Commission, and the chief elected municipal official for the city or town in which the herbicide treatment is proposed.

The Department allows a 45-day comment period on the proposed YOP beginning with publication of the notice in the Environmental Monitor and receipt of the YOP and Environmental Monitor notice by each municipality.

Public notification of herbicide applications to the right-of-way is made by registered mail at least 21 days in advance of the treatment. Notice is made to the Department of Agricultural Resources; the Mayor, City Manager or chairman of the Board of Selectman; the Board of Health; and the Conservation Commission of the municipality where the right-of-way lies.

Any comments on this YOP should be directed to:

CW Layton Consultants  
78 South Main Street  
New Salem, MA 01355  
(978) 544-7892

**MUNICIPALITIES WHERE TREATMENT DESCRIBED IN THIS YOP WILL BE MADE**

- Boston
- Braintree
- Brookline
- Cambridge
- Malden
- Medford
- Milton
- Newton
- Quincy
- Revere
- Somerville

**YOP REQUIREMENTS AND TABLE OF CONTENTS**

ABSTRACT .....1

INTRODUCTION..... 2

MUNICIPALITIES WHERE TREATMENTS DESCRIBED IN THIS YOP WILL BE MADE

YOP REQUIREMENTS AND TABLE OF CONTENTS.....3

I. THE COMPANY WHICH WILL PERFORM ANY HERBICIDE TREATMENT.....4

II. INDIVIDUAL REPRESENTING APPLICANT AND SUPERVISING THE YOP .....4

III. HERBICIDES PROPOSED INCLUDING APPLICATION RATES, CARRIERS,  
ADJUVANTS, AND APPLICATION TECHNIQUES .....5

IV. HERBICIDE APPLICATION TECHNIQUES AND ALTERNATIVE CONTROL  
PROCEDURES AND SCHEDULE .....6

V. IDENTIFICATION OF TARGET VEGETATION .....7

VI. FLAGGING METHODS TO DESIGNATE SENSITIVE AREAS ON THE ROW .....8

VII. PROCEDURES AND LOCATIONS FOR HANDLING, MIXING, AND LOADING OF  
HERBICIDE CONCENTRATES .....9

VIII. HERBICIDE INFORMATION, FACT SHEETS AS APPROVED BY THE  
DEPARTMENT OF AGRICULTURAL RESOURCES, HERBICIDE LABELS, AND SDS.....10

IX. EMERGENCY CONTACTS .....11

X. REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS .....12

APPENDICES.....14

## APPENDICES

- A. Herbicide Fact Sheets as approved by the Department of Agricultural Resources, herbicide labels, and MSDS.
- B. Maps locating the ROW and sensitive areas not readily identifiable in the field.

### I. THE COMPANY WHICH WILL PERFORM ANY HERBICIDE TREATMENT

These companies or contractors will perform the herbicide treatment. Applicators are certified by the Department of Agricultural Resources in the applicator category Right-of-Way Pest Control.

Northern Tree Service  
1290 Park Street  
Palmer, MA  
Tim Lamotte  
800-232-6132

OTHERS TO BE DETERMINED

### II. INDIVIDUAL REPRESENTING APPLICANT AND SUPERVISING THE YOP

Arzu Kurkoglu Hemann PE, Deputy Director - MOW

MBTA Maintenance of Way  
21 Arlington Ave  
Charlestown, MA 02129

Office (857) 292-6147

### III. HERBICIDES PROPOSED INCLUDING APPLICATION RATES, CARRIERS, ADJUVANTS, AND APPLICATION TECHNIQUES

#### Weed Control Herbicide Program for the Roadbed

The post-emergent herbicide program is aimed primarily toward keeping the ballast section and shoulder, yards, switches, signals, and highway grade crossings weed free. Areas scheduled for weed control treatments have been inspected for density of target vegetation to determine appropriate control methods. Herbicide Fact Sheets for the herbicides proposed are found in Appendix A.

#### Brush Control Program for Areas Adjacent to the Roadbed

The brush control program is designed to prevent the re-growth of trees and other woody vegetation in areas adjacent to the roadbed. Areas scheduled for brush control treatments are limited to target vegetation which obscures visibility or interferes with railroad signs, signals, or communication wires. Herbicide Fact Sheets for herbicides proposed may be found in Appendix A.

#### Materials to Be Used

Location	Herbicide(s)	Carriers or Adjuvants	Application Technique	Application Rate
Sensitive area buffer zone And Non-Sensitive Areas		Clean-cut Lo-Drift	Foliar	16 oz/acre 4-8 oz/acre
		LI-700	Foliar	1-4 pts/acre
And Touch-up applications		Nu Film	Foliar	4 oz-1pt/acre
	Round Up Pro		Foliar	4 pts/acre
	Esplanade 200 SC		Foliar	5-7 fl oz/acre
	Aquaneat		Foliar	1.75-4.5 pts/acre
	Oust Extra Oust XP		Foliar	3 oz/acre
	Krenite S		Foliar	1.5 gal/acre
	Arsenal Arsenal Powerline		Foliar	2 pints/acre (every other year)
	Milestone		Foliar	3 oz/acre
	Opensight		Foliar	3 oz/acre
	Escort XP		Foliar	1 oz/acre
	Garlon 4 Garlon4 Ultra		Foliar Basal	Between 10'&50' of resource .5 pts/acre Over 50' 3 pts/acre

	Basal Oil	Basal	9 pts/acre

**IV. HERBICIDE APPLICATION TECHNIQUES AND ALTERNATIVE CONTROL PROCEDURES AND SCHEDULE**

Herbicide applications within the Railroad right-of-way will be performed using low pressure application techniques that at no time exceed 60 psi. The equipment to be used will consist of hand operated backpack sprayers, motorized backpack sprayers, and Hy-Rail truck mounted boom sprayers, all operating at low pressure. Track conditions at the time of treatment dictate the application method and the area of the right-of-way will determine the herbicide mix, whether it is track and ballast or brush treatment on the edge.

Whichever application method is used the crews will have a front person, and or co-pilot in the truck, equipped with detailed mapping applications that will identify the location of sensitive areas ahead of time. Sensitive areas are marked with a signpost at the side of the rail bed and are highly visible.

**Alternative Control Procedures**

No alternative vegetation control methods are feasible within the track areas of the right- of-way. No chemical vegetation control is proposed in ballast areas where herbicide use is prohibited.

**Touch-up treatments**

These are used to control vegetation that was missed in the initial application. This missed vegetation can occur both in the ballast track area, or on the edges of the rail. This can also apply to new vegetation that has grown in since the original treatment. However, no more that 10% of the initially identified target vegetation on the right-of-way in any municipality may be treated during a touch-up application and the total amount of herbicide applied in any one year shall not exceed the limits specified by the label or YOP [per 11.03(8)(c) ]

**Schedule**

MBTA intends to commence initial foliar application of herbicides in Spring, starting after April 1, for pre-emergent applications and after May 1 for post emergent application when vegetation has fully greened up. Application in an area may be delayed by rain or windy conditions. Application will continue through the growing season. Any touch-up or brush spraying that may be required will commence after vegetation has hardened off in late Spring early Summer. Foliar work will conclude when foliage turns color or November 15th. Basal and cut stump applications will go from March 1st until December 31st.

## V. IDENTIFICATION OF TARGET VEGETATION

Whenever and wherever possible an integrated approach to vegetation management will be implemented by encouraging plant communities that hinder the growth of target vegetation. Prior to an herbicide application, a review will be made noting location, density, and type of vegetation present. This information will be used to develop an herbicide application program that will be effective against target vegetation and minimize the amount of herbicide used.

In accordance with the Code of Federal Regulations, 49 Part 213 - Track Safety Standards, all vegetation growing in the ballast and ballast shoulder; in yards; and around switches, signals, signs and highway grade crossings is considered target vegetation and must be controlled so that it does not:

- a) become a fire hazard to track-carrying structures.
- b) obstruct visibility of railroad signs and signals.
- c) interfere with railroad employees performing normal trackside duties.
- d) prevent proper functioning of signal and communication lines; and
- e) prevent railroad employees from visually inspecting moving equipment from their normal duty stations.

Woody vegetation growing in areas adjacent to the shoulder will be managed to promote the growth of low growing shrubs. Targeted woody vegetation will be that which has the potential to block visibility or invade the roadbed and/or overhead communication lines. Target vegetation will include but not be limited to the following:

Ailanthus  
American Basswood American Beech American Hornbeam Apple  
Ash Aspen Birch  
Black Locust  
Black Tupelo  
Black Walnut Buckthorn Butternut Cherry  
Eastern Hophornbeam  
Eastern Red Cedar  
Elm  
Flowering Dogwood  
Hawthorn  
Hickory  
Honey Locust  
Maple  
Northern Catalpa  
Oak Pine Poplar Sassafras Shadbush Spruce Sumac

## VI. FLAGGING METHODS TO DESIGNATE SENSITIVE AREAS ON THE ROW

Sensitive areas are defined in the Rights-Of-Way Management Regulations (333 CMR 11.02) are as defined in 333 CMR 11.04, any areas within the Right-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. These include but are not limited to the following:

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) 10 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) 10 feet of any Wetlands or Water Over Wetlands;
- h) 10 feet of the mean annual high-water line of any river; and
- i) 10 feet of any Certified Vernal Pool.

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

- a) any Zone I or IWPA;
- b) a distance of between 100 feet and 400 feet of any Class A Surface Water source;
- c) a distance of between 10 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 10 feet from the mean annual high-water line of any river and the outer boundary of the Riverfront Area;
- h) a distance of between 10 feet from any Certified Vernal Pool and the outer boundary of any Certified Vernal Pool Habitat;
- i) and a distance of 100 feet of any Agricultural or Inhabited Area.

\* Limited Spray Area(s) are those in which spraying is restricted to one annual application of an herbicide through low pressure foliar techniques.

Non-Sensitive Areas are upland areas and/or track not in proximity to sensitive areas and do not require specific precautions or herbicide restrictions.



Sensitive areas, no-spray areas, limited-spray areas, and non-sensitive areas will be marked at their boundaries with permanent color-coded markers. Sensitive areas considered to be readily identifiable in the field (i.e., agricultural and inhabited areas) will not be marked. The markers will be one or any combination of the following:

- Color-coded signs attached to posts (primary method)
- Color-coded signs attached to the railroad ties
- Color-coded painted rail sections

Sensitive and non-sensitive areas will be designated by the following color-codes:

- White non-sensitive areas
- Blue sensitive areas in which a minimum of 12 months shall elapse between herbicide applications.
- Double Blue sensitive areas in which a minimum of 24 months shall elapse between herbicide applications.
- Yellow. no spray zones

## **VII. PROCEDURES AND LOCATIONS FOR HANDLING, MIXING, AND LOADING OF HERBICIDE CONCENTRATES**

The herbicide application crew will wear protective clothing and personal safety equipment when mixing, handling, loading, or applying herbicide, including standard work clothing or coveralls, work gloves, and work boots. Latex or nitrile rubber gloves, as well as eye goggles are recommended to be worn during mixing of herbicide concentrate as some herbicides may cause mild eye and skin irritations.

Mixing and use of herbicide shall be consistent with the labeling instructions included on the packaging. The herbicide mix will be prepared from herbicide concentrate and water. In compliance with the regulations, the handling, mixing and/or loading of this material will not occur within 100 feet of any sensitive area. Wherever and whenever possible, the herbicide applicator will prepare the herbicide mix on non-porous surfaces, such as pavement or concrete.

### Sources of Water and Safeguards to Prevent Contamination

Water used for herbicide mix will be obtained from hydrants and freshwater sources. During the herbicide mix preparations and during herbicide application, strict adherence to the following safeguards will be maintained:

- 1) Water will be obtained using hoses equipped with anti-siphon devices to eliminate herbicide backflow.
  - a) Hoses used to extract water from water bodies will be equipped with two such devices: one will be found directly behind the mouth of the hose, and another will be at the coupling that joins the hose to the mix tank.

b) Hoses used to extract water from the hydrant will utilize the same setup as described above, except that a third anti-siphon device will be found within the coupling joining the hose to the hydrant.

- 2) The herbicide concentrate will not be added to the tank until the water has been obtained and the application apparatus is at least 100 feet outside a sensitive area

Disposal of Herbicidal Wastes

Disposal of all herbicidal wastes will be the responsibility of the licensed applicator. It is the applicator's responsibility to ensure that such disposal will be carried out in an environmentally sensitive manner, in compliance with all Federal and State regulations and guidelines.

**VIII. HERBICIDE INFORMATION, FACT SHEETS AS APPROVED BY THE DEPARTMENT OF AGRICULTURAL RESOURCES, HERBICIDE LABELS, AND SDS.**

Below is a list of herbicides from MDAR’s Sensitive Area Materials List site in use by this Yearly Operational Plan. For a list of the products and rates of application proposed to be used in this year's program please refer to page 5 and 6 of this document.

<b>MANUFACTURER</b>	<b>PRODUCT NAME</b>	<b>ACTIVE INGREDIENT(S)</b>	<b>EPA REGISTRATION #</b>
Albaugh, Inc	KRENITE S	FOSAMINE AMMONIUM	42750-247
BASF	ARSENAL POWERLINE HERBICIDE	IMAZAPYR	241-431
	ARSENAL		241-346
Bayer Cropscience LP	ROUND UP PRO	GLYPHOSATE	524-475
Nu Farm Americas	AQUANEAT	GLYPHOSATE	228-365
Bayer Environmental Science	ESPLANADE 200 SC	INDAZIFLAM	432-1516
Bayer Environmental Science	OUST EXTRA	SULFOMETURON METHYL METSULFURON METHYL	432-1557
Bayer Cropscience LP	OUST XP	SULFOMETURON METHYL	432-1552
Bayer Cropscience LP	ESCORT XP	METSULFURON METHYL	432-1549
Corteva Agriscience LLC	GARLON 4 ULTRA	TRICLOPYR	62719-527
	GARLON 4		62719-40
Corteva Agriscience LLC	MILESTONE	AMINOPYRALID-TRIPROMINE	62719-519

Corteva Agriscience LLC	OPENSIGHT	AMINOPYRALID; METSULFURON	62719-597
----------------------------	-----------	---------------------------	-----------

### LABELS & SDS SHEETS:

To access the labels and SDS sheets for any of the above products please follow the directions below:

1. Open your internet browser and enter the following address in the **Address Bar**:

<https://www.cdms.net/Label-Database>

2. Select the Manufacture (as found above) you wish to be informed about from the side bar on the left side of the page.

3. A list of products will appear. Please be sure to reference the Product Name to locate the correct information.

### HERBICIDE FACT SHEET:

To access the herbicide fact sheets for any of the above products please follow the directions below:

1. Open your internet browser and enter the following address in the **Address Bar**:

<https://www.mass.gov/service-details/rights-of-way-sensitive-area-materials-list>

2. Choose the link that corresponds to the **Active Ingredient** present in the product you are interested in.

## IX. EMERGENCY CONTACTS

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

- Massachusetts Pesticide Bureau Main # **(617) 626-1720**
- MA Department of Agricultural Resources (MDAR) **(617) 626-1700**
- MA Department of Environmental Protection (DEP) Incident Response Unit **1-888-304-1133**
- ChemTrec **(800) 424-9300**
- MA Poison Control Center **(800) 222-1222**
- Environmental Protection Agency Pesticide Hotline **(800) 858-7378**
- MA Department of Public Health, Bureau of Environmental Health, Environmental Toxicology Program **(617) 624-5757**
- MBTA **(617) 222 3200**
- State Police Main Number **(508) 820-2300**

- Herbicide Label
- Herbicide Fact Sheet
- Herbicide Material Safety Data Sheet
  - Herbicide Manufacturer
  - BASF Specialty Products..... (800) 545-9525
  - Albaugh..... (800) 424-9300
  - Nu Farm Turf & Specialty ..... (800) 345-3330
  - Dow / Corteva ..... (800) 992-5994
  - Bayer..... (800) 334-7577
  
- Local Community Chief of Police and/or Fire Chief
  - Boston (617) 247-4200
  - Braintree (781) 843-1212
  - Brookline (617) 730-2222
  - Cambridge (617) 498-9300
  - Malden (781) 322-1212
  - Medford (781) 395-1212
  - Milton (617) 698-3800
  - Newton (617) 552-7240
  - Quincy (617) 479-1212
  - Revere (781) 284-1212
  - Somerville (617) 625-1600

**X. REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS**

Pesticides are defined by MDAR as substances or mixture of substances that prevent, destroy, repel or mitigate pests, or defoliate, desiccate or regulate plants. This remedial plan outlines proper procedures for addressing pesticide accidents. Since every incident is different, applicators must weigh factors specific to the situation and use their own judgment to decide on the appropriate course of action. Because applicators normally carry only small amounts of pesticides, the potential for serious accidents is relatively small. Federal and state statutes establish emergency response procedures that must be followed by the companies and their contractors in the event of a spill or related accident. Under the Federal Environmental Pesticide Control Act, it is the applicator’s legal responsibility to clean up pesticide spills resulting from their use and handling of the product. Applicators are liable for damages, subject to penalties, and obligated to cleanup and decontaminate areas resulting from pesticide spills.

## A. Handling, Mixing, and Loading

All mixing and loading of pesticides will be managed and performed by a hired licensed contractor in a controlled environment in accordance with manufacturer's instructions. Only the amount **Address Bar:** of pesticides necessary to carry out vegetation control work planned for that day will be mixed to minimize waste and the need for excess handling. The vehicles carrying out the spray operations will be equipped with a bag of absorbent, activated charcoal, leak-proof containers, a broom and a shovel in case of minor spills. A clipboard log of all pesticides on board the vehicle will be kept on the vehicle. Pesticide labels and safety data sheets (SDS) will be carried on-site by the applicator.

## B. Spills and Related Accidents

For the purpose of this YOP, 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. Any minor spill will be reported to the Pesticide Bureau. Major spills will be handled in a similar manner as minor spills, except in cases where the spill cannot be contained and/or removed by the crew. In this case the MassDEP Incident Response Unit and the Pesticide Bureau must be contacted. Emergency first responders (including but not limited to fire and police) will be notified immediately of any major spills and/or incidents of any size deemed to be a potential risk to public health, safety and the environment. MassDEP will be contacted when there is a spill of a regulated quantity, regardless of major or minor spill status, and in accordance with 310 CMR 40.00 Massachusetts Contingency Plan. In the event that any spill is observed, immediate action will be taken to contain the spill and protect the spill area as follows:

- 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 Emergency Contact List below) if unable to handle the spill, or if the material is unfamiliar.
- f) Notify the MADEP if water bodies are contaminated, and for releases or threatened releases of reportable quantities of hazardous material.
- g) 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 pesticides, 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.

## APPENDICES

- A. Herbicide Fact Sheets as approved by the Department of Agricultural Resources, herbicide labels, and MSDS.

Go To: <https://www.mass.gov/service-details/rights-of-way-sensitive-area-materials-list>

- B. Maps locating the ROW and sensitive areas not readily identifiable in the field.

Go To: <https://www.mbta.com/sustainability/vegetation-management>