Yearly Operational Plan

2022

CSX Transportation, Inc.

500 Water Street
Jacksonville FL 32202

Prepared by:

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YOP REQUIREMENTS AND TABLE OF CONTENTS

INTRODUCTION

Federal and State laws require railroads to manage vegetation within their rights-of-way (ROW) to help ensure the safe passage of people and material goods.

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

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 vegetation control along rights-of-way. These regulations establish procedures which guarantee ample opportunity for public and municipal agency review and input on rights-of-way management plans.

A Yearly Operational Plan (YOP) must be submitted to the Massachusetts Department of Agricultural Resources (DAR) every year herbicides are intended for use to maintain rights-of-way. The YOP provides a detailed description of the vegetation management program for the year. This YOP is a companion document to the Vegetation Management Plan (VMP) earlier approved by DAR. 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, DAR will publish a notice in the Environmental Monitor. The applicant will provide a copy of the YOP and Environmental Monitor notice to the Board of Health, Conservation Commission, and the chief elected municipal official for each city or town in which the herbicide treatment is proposed. DAR 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.

Any comments on this YOP should be directed to:

Wood Environment & Infrastructure Solutions, Inc.
Attn: Stephen Herzog
271 Mill Road
Chelmsford MA 01824

or by email to stephen.herzog@woodplc.com, or to the railroad contact person listed on page 3 (Section II).

MUNICIPALITIES WHERE CONTROL TREATMENTS WILL BE MADE (39):

Auburn	Montgomery
Becket	Northborough
Berlin	Oxford
Bolton	Palmer
Brimfield	Pittsfield
Brookfield	Richmond
Charlton	Russell
Chester	Southborough
Clinton	Spencer
Dalton	Springfield
East Brookfield	Sterling
Framingham	Warren
Hinsdale	Washington
Huntington	West Brookfield
Lancaster	West Springfield
Leicester	West Stockbridge
Leominster	Westfield
Marlborough	Wilbraham
Middlefield	Worcester
Monson	

I. THE COMPANY WHICH WILL PERFORM HERBICIDE TREATMENT

This company or contractor will perform the herbicide treatment. Applicators are certified by the Department of Agricultural Resources in the applicator category Right-of-Way Pest Control.

Company Name	Asplundh Tree Expert, LLC
Telephone #	215-356-5552
Contact Person(s)	Mark Goodall
Email	mgoodall@asplundh.com

II. INDIVIDUAL REPRESENTING APPLICANT AND SUPERVISING THE YOP

Individual supervising execution of the YOP and representing the railroad.

Name & Title	Stephen Herzog, Project Manager
Address	Wood Environment & Infrastructure Solutions, Inc. 271 Mill Road Chelmsford MA 01824
Telephone #	(508) 517-6470
Email	stephen.herzog@woodplc.com

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

Weed Control Herbicide Program for the Roadbed

The post-emergent herbicide program to be implemented in 2022 is designed to keep the rail area, ballast section and shoulder, yards, switches, signals, and highway grade crossings free of weeds, as described in the VMP. Areas scheduled for weed control treatments will first be inspected for density of target vegetation to determine appropriate control methods. The following post-emergent herbicides are proposed for use in 2022. Note that the same chemicals are proposed for all weed control areas of the railroad, both sensitive area buffer zones and non-sensitive areas. These materials are all listed on the Massachusetts Sensitive Area Materials List. Herbicide Fact Sheets for the herbicides proposed are contained in Appendix A.

Location	Herbicide(s)	Carriers or Adjuvants	Application Technique	Application Rate per Acre
Sensitive area buffer zone	Rodeo		Foliar	3 pints
	Oust XP		Foliar	4 ounces
	Escort or Patriot		Foliar	1.5 ounces
		Hot Mes	Foliar	3 ounces
Non-sensitive area buffer zone	Same as above	Same as above	Same as above	Same as above

Brush Control Program for Areas Adjacent to the Roadbed

The brush control program is designed to prevent the regrowth of trees and other woody vegetation in areas adjacent to the roadbed, including tree branches encroaching on the track. CSX will not spray brush on the railroad in 2022.

IV. HERBICIDE APPLICATION TECHNIQUES, ALTERNATIVE CONTROL PROCEDURES, AND INTENDED SCHEDULE.

Herbicide application within the entirety of CSX's railroad right-of-way in Massachusetts will be performed using low pressure application from a specialized hi-rail truck equipped with a spray boom. This method is suitable for application within the buffer zone of sensitive areas, as defined in 333 CMR 11.04. The spray vehicle is equipped with spray nozzles and controls to allow for treatment of the entire roadbed, or to selectively treat individual sections of the ballast and ballast shoulders. Within sensitive areas where spraying is not permitted, a trough apparatus mounted just behind and above the boom and will be hydraulically lowered to sit underneath the spray nozzles while the vehicle is traveling through areas where herbicide spraying is prohibited to catch any accidental dripping of herbicide from the spray nozzles.

In order to assist in rapid identification of sensitive areas in the field, a pilot vehicle will proceed ahead of the applicator vehicle. The weed spray operation will be accompanied by a technician carrying maps of the rights-of-way and all sensitive areas to assist in accurate identification of these areas in the field.

ALTERNATIVE CONTROL PROCEDURES

No alternative vegetation control methods are feasible within the track areas of the right-of-way. Vegetation control is generally not proposed in those ballast areas where herbicide use is prohibited. In particular cases where vegetation presents a problem in herbicide-prohibited areas, such as on bridges, manual control will be made using manual or machine cutting tools.

Touch-up techniques control any target vegetation within the ballast that may have been missed or not treated during the initial phase. Control of vines and other vegetation that might creep onto the ballast from roots growing outside the original treatment boundaries can be managed as a selective, foliage, or spot spray. No more than 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

CSX intends to commence application of herbicides after plant emergence during the growing season after June 1 according to a schedule that will be distributed to all affected town agencies a minimum of 21 days in advance of the application.

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.

All herbaceous vegetation growing in the roadbed and ballast shoulders will be treated for control.

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 species:

Ailanthus
American Basswood
American Beech
American Hornbeam
Apple
Ash
Aspen
Birch
Black Locust
Black Tupelo
Black Walnut
Buckthorn
Butternut
Cherry
Eastern Hop Hornbeam
Eastern Redcedar
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, no-spray areas, limited-spray areas, and non-sensitive areas not readily identifiable in the field are marked at their boundaries with permanent color-coded markers as described at the end of this section. Sensitive areas considered to be readily identifiable in the field will not be marked. CSX has determined that the following areas are readily identifiable in the field: inhabited areas; agricultural areas; and areas of intermittent standing or flowing water, such as drainage ditches, in which herbicide application is prohibited in the event that standing or flowing water is present at the time of application (not including intermittent tributaries to a Class A surface water source, whether in a natural or artificial channel, which are mapped as restricted).

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

No-Spray areas are those areas in which any herbicide spraying is prohibited. These include the following areas when they are within a right-of-way and within:

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

Limited-Spray areas are those in which spraying is restricted to either one annual application (one-year limited spray), or one application in 24 months (2-year limited spray), of an herbicide through low pressure foliar techniques. These limited spray areas consist of the following areas when they are within a right-of-way and within:

(a) any Zone II or Interim Wellhead Protection Area;
(b) between 100 and 400 feet from any Class A Surface Water Source;
(c) between ten and 200 feet of any tributary or associated surface water body where the tributary or associated surface water body runs outside the Zone A for the Class A surface water source;
(d) a lateral distance of between 100 and 200 feet for 400 feet upstream, on both sides of the river, of a Class B Drinking Water Intake;
(e) a distance of between 50 and 100 feet of any identified Private Well;

(f) a distance of between 10 and 100 feet of any Wetlands or Water Over Wetlands;
(g) a distance of between ten feet from the mean annual high-water line of any river and the outer boundary of the Riverfront Area;
(h) a distance of between ten feet from any Certified Vernal Pool and the outer boundary of any Certified Vernal Pool Habitat; and
(i) a distance of 100 feet of any Agricultural or Inhabited Area.

Non-sensitive areas are upland and/or track without proximate 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 by one or any combination of the following:

- color-coded signs attached to the railroad ties
- color-coded painted rail sections and/or ties
- color-coded signs attached to posts

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

- White: non-sensitive areas
- Blue: sensitive area in which a minimum of 12 months shall elapse between herbicide applications
- Purple: sensitive areas in which a minimum of 24 months shall elapse between herbicide applications.
- Yellow: no spray zone

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 because some herbicide concentrates may cause mild eye or 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 backflow as described below.

    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 which 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 is carried out in an environmentally sensitive manner, in compliance with all Federal and State regulations and guidelines.

VIII. EMERGENCY CONTACTS

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

Herbicide Label

Herbicide Fact Sheet

Herbicide Safety Data Sheet

Chemtrec (chemical emergency response specialist) (800) 424-9300

Massachusetts Pesticide Bureau (617) 626-1782

Massachusetts Department of Environmental Protection (617) 292-5500

EPA Pesticide Hotline (800) 858-7378

Massachusetts Poison Control Center (800) 682-9211

Local Community Chief of Police and/or Fire Chief

Auburn	(508) 832-7777
Becket	(413) 555-1212
Berlin	(978) 838-7355
Bolton	(978) 779-2276
Brimfield	(413) 245-3442
Brookfield	(508) 867-2233
Charlton	(508) 248-5868
Chester	(413) 354-7822
Clinton	(978) 999-0733
Dalton	(413) 684-0300
East Brookfield	(508) 867-6358
Framingham	(508) 872-1212
Hinsdale	(413) 655-2712
Huntington	(413) 667-8868
Lancaster	(978) 368-1380
Leicester	(508) 892-3626
Leominster	(978) 534-7560
Marlborough	(508) 624-6951
Middlefield	(413) 623-5060
Monson	(413) 267-5136
Montgomery	(413) 862-4545
Northborough	(508) 393-1515
Oxford	(508) 987-0156
Palmer	(413) 283-8792
Pittsfield	(413) 443-1651
Richmond	(413) 442-3693
Russell	(413) 862-3345
Southborough	(508) 485-2121
Spencer	(508) 885-6333
Springfield	(413) 787-6313
Sterling	(978) 422-7331
Warren	(413) 436-9595
Washington	(414) 623-5111
West Brookfield	(508) 867-6888
West Springfield	(413) 732-7421
West Stockbridge	(413) 499-7357
Westfield	(413) 562-5411
Wilbraham	(413) 596-3837
Worcester	(508) 799-8600

APPENDICES

A. Herbicides approved by the Department, herbicide labels, and MSDS

B. Maps of the ROW and Sensitive areas not readily identifiable in the field

APPENDIX A

Below is the list of herbicides intended for potential use in 2022 under this YOP. For a list of the products and rates of application please refer to Section III of this YOP.

PRODUCT NAME	MANUFACTURER	ACTIVE INGREDIENT(S)	EPA REG. NUMBER
Rodeo	Corteva Agriscience	Glyphosate	62719-324
Oust XP	Bayer Environmental Science	Sulfometuron methyl	432-1552
Escort XP	Bayer Environmental Science	Metsulfuron Methyl	432-1549
Patriot	Nufarm Americas	Metsulfuron methyl	228-391

LABELS & SDS SHEETS:

Product labels and Safety Data Sheets are available on the internet through the web site of Crop Data Management Systems, Inc. at www.cdms.net

1. Open: http://www.cdms.net/LabelsMsds/LMDefault.aspx
2. In the "Brand Name" **Search bar,** enter the **Product Name** and press **Search**
3. A list of products will appear. Reference the **EPA Registration Number** to the product in order to locate the correct version.

HERBICIDE FACT SHEETS:

Massachusetts DAR Herbicide Fact Sheets are available on the internet.

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

2. Search, scross, or select the **Active Ingredient(s)** present in the product you are querying for more information on that product and ingredient.

Hard copies of labels, SDS, or herbicide fact sheets may also be obtained by contacting:

Wood Environment & Infrastructure Solutions, Inc.
by email: stephen.herzog@woodplc.com

APPENDIX B

MAPS

Maps of each town locating the rights-of-way and sensitive areas not readily identifiable in the field are available electronically or in hard copy upon request. Please contact:

Wood Environment & Infrastructure Solutions, Inc.
by email: stephen.herzog@woodplc.com