

Yearly Operational Plan

2011

CSX TRANSPORTATION, INC.

**500 WATER STREET
JACKSONVILLE, FL. 32202**

Prepared by:

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**Revised May 2011 for
City of Springfield
Town of Washington**

ABSTRACT

This Yearly Operational Plan (YOP) describes intended vegetation management operations for CSX Transportation's rights-of-way scheduled for vegetation maintenance during calendar year 2011 in compliance with the Commonwealth of Massachusetts Rights-of-Way Management Regulations 333 CMR 11.00.

This YOP is consistent with the Vegetation Management Plan (VMP) prepared by CSX Transportation for the period January 1, 2010 through December 31, 2014 which has been approved by the Massachusetts Department of Agricultural Resources also in accordance with 333 CMR 11.00.

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INTRODUCTION

Federal and State laws require railroads to manage vegetation within their rights-of-way (ROW) to help ensure the safe passage of people, material, and 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 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 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 AMEC Earth and Environmental, attn. Stephen Herzog, 2 Robbins Road, Westford MA 01886, stephen.herzog@amec.com, or to the railroad contact person listed on page 3 (Section II).

MUNICIPALITIES WHERE CONTROL TREATMENTS WILL BE MADE (65):

Ashland	Montgomery
Attleboro	Natick
Auburn	Newton
Becket	Northborough
Berlin	Norton
Bolton	Norwood
Boston	Oxford
Brimfield	Palmer
Brookfield	Pittsfield
Brookline	Raynham
Cambridge	Richmond
Charlton	Russell
Chester	Seekonk
Clinton	Sherborn
Dalton	Somerville
East Brookfield	Southborough
Everett	Spencer
Foxborough	Springfield
Framingham	Sterling
Grafton	Taunton
Hinsdale	Walpole
Huntington	Warren
Lakeville	Washington
Lancaster	Wellesley
Leicester	West Brookfield
Leominster	West Springfield
Mansfield	West Stockbridge
Marlborough	Westborough
Medfield	Westfield
Middleborough	Weston
Middlefield	Wilbraham
Millbury	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 RWC, Inc.
Address P.O. Box 876
248 Lockhouse Road
Westfield, MA 01086
Telephone # (413) 562-5681
Contact Person(s) Brian Chateauvert
Email bchateauvert@rwcinc.biz

Also only for brush control at public passive crossings in the City of Springfield and Town of Washington:

Company Name DeAngelo Brothers, Inc.
Address 100 Conahan Drive
Hazleton, PA 18201
Telephone # (570) 459-5800
Contact Person(s) Tim McBride
Email tmcbride@dbiservices.com

II. INDIVIDUAL REPRESENTING APPLICANT AND SUPERVISING THE YOP

Individual supervising execution of the YOP and representing the railroad.

Name & Title Jack Hamilton, Manager Engineering Programs.
Address CSX Transportation, Inc.
500 Water Street
Jacksonville, FL 32202
Telephone # (904) 359-1333

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 2011 is designed to keep the rail area, ballast section and shoulder, yards, switches, signals, and highway grade crossings weed-free. 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 2011. Herbicide Fact Sheets for the herbicides proposed are contained in Appendix A.

Location	Herbicide(s)	Carriers or Adjuvants	Application Technique	Application Rate
Sensitive area buffer zone	Razor or Razor Pro		Foliar	2 qt/acre
	Escort XP		Foliar	2 oz/acre
	Oust XP		Foliar	4 oz/acre
		More	Foliar	2-5 oz/100 gal
		Incite80	Foliar	2-5 oz/100 gal
Non-sensitive areas	Razor or Razor Pro		Foliar	2 qt /acre
	Escort XP		Foliar	2 oz/acre
	Oust XP		Foliar	4 oz/acre
		More	Foliar	2-5 oz/100 gal
		Incite80	Foliar	2-5 oz/100 gal
Touch-up applications	Razor or Razor Pro		Foliar	2 qt /acre
		More	Foliar	2-5 oz/100 gal
		Incite80	Foliar	2-5 oz/100 gal

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. 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 are contained in Appendix A.

Location	Herbicide(s)	Carriers or Adjuvants	Application Technique	Application Rate
Sensitive area buffer zone	Razor or Razor Pro		Foliar	4 qt/acre
	Escort		Foliar	2 oz/acre
	Garlon 4		Foliar	0.5 pints/acre between 10 and 50 feet from wetlands*; 3 pints/acre elsewhere
		More	Foliar	2-5 oz/100 gal
		Incite80	Foliar	2-5 oz/100 gal
Non-sensitive areas	Razor or Razor Pro		Foliar	4 qt/acre
	Escort		Foliar	2 oz/acre
	Garlon 4		Foliar	3 pints/acre
		More	Foliar	2-5 oz/100 gal
		Incite80	Foliar	2-5 oz/100 gal
Touch-up applications	None			

** no application is allowed within 10 feet from wetlands or water over wetlands*

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, or restricted application 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 container will be used to catch any accidental dripping of herbicide. This is a trough-shaped 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.

In order to assist in rapid identification of sensitive areas in the field, a pilot vehicle will proceed ahead of the applicator vehicle in order to signal the location of sensitive areas. The pilot 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.

In order to provide greater mobility and decrease the amount of time required to apply the herbicide mixture in the railroad yard areas, a vehicle equipped with hoses will be used in these areas. In compliance with the regulations for herbicide application in sensitive areas, the spray pressure will not exceed 60 psi.

ALTERNATIVE CONTROL PROCEDURES

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

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 initial application of herbicides on June 6, 2011. Application in an area may be delayed by rain or windy conditions. Application will conclude on or before July 1, 2011. Any touch-up spraying that may be required will commence after August 1, 2011 and will conclude by August 31, 2011.

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 a herbicide application, a review will be made noting location, density, and type of vegetation present. This information will be used to develop a 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 species:

Ailanthus	Eastern Redcedar
American Basswood	Elm
American Beech	Flowering Dogwood
American Hornbeam	Hawthorn
Apple	Hickory
Ash	Honey Locust
Aspen	Maple
Birch	Northern Catalpa
Black Locust	Oak
Black Tupelo	Pine
Black Walnut	Poplar
Buckthorn	Sassafras
Butternut	Shadbush
Cherry	Spruce
Eastern Hop Hornbeam	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 below. 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 posts
- color-coded signs attached to the railroad ties
- color-coded painted rail sections and/or ties

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
- double or dark blue: 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 herbicide 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 Material 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

Ashland	(508) 881-1212	Montgomery	(413) 862-4545
Attleboro	(508) 222-9614	Natick	(508) 651-7281
Auburn	(508) 832-7777	Newton	(617) 552-7240
Becket	(413) 555-1212	Northborough	(508) 393-1515
Berlin	(978) 838-7355	Norton	(508) 285-0200
Bolton	(978) 779-2276	Norwood	(781) 762-6888
Boston	(617) 247-4200	Oxford	(508) 987-0156
Brimfield	(413) 245-3442	Palmer	(413) 283-8792
Brookfield	(508) 867-2233	Pittsfield	(413) 443-1651
Brookline	(617) 730-2222	Raynham	(508) 824-2716
Cambridge	(617) 498-9300	Richmond	(413) 442-3693
Charlton	(508) 248-5868	Russell	(413) 862-3345
Chester	(413) 354-7822	Seekonk	(508) 336-8510
Clinton	(978) 999-0733	Sherborn	(508) 653-2424
Dalton	(413) 684-0300	Somerville	(617) 625-1600
East Brookfield	(508) 867-6358	Southborough	(508) 485-2121
Everett	(617) 389-2120	Spencer	(508) 885-6333
Foxborough	(508) 543-4343	Springfield	(413) 787-6313
Framingham	(508) 872-1212	Sterling	(978) 422-7331
Grafton	(508) 839-2858	Taunton	(508) 824-7522
Hinsdale	(413) 655-2712	Walpole	(508) 668-1095
Huntington	(413) 667-8868	Warren	(413) 436-9595
Lakeville	(508) 947-4425	Washington	(414) 623-5111
Lancaster	(978) 368-1380	Wellesley	(781) 235-1212
Leicester	(508) 892-3626	West Brookfield	(508) 867-6888
Leominster	(978) 534-7560	West Springfield	(413) 732-7421
Mansfield	(508) 261-7300	West Stockbridge	(413) 499-7357
Marlborough	(508) 624-6951	Westborough	(508) 366-8801
Medfield	(508) 359-2315	Westfield	(413) 562-5411
Middleborough	(413) 623-5060	Weston	(781) 893-4803
Middlefield	(508) 947-1212	Wilbraham	(413) 596-3837
Millbury	(508) 865-3521	Worcester	(508) 799-8600
Monson	(413) 267-5136		

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 a list of herbicides for potential use in 2011 under this YOP. For a list of the exact products and rates of application please refer to Section III of this YOP.

MANUFACTURER	PRODUCT NAME	ACTIVE INGREDIENT(S)	EPA REGISTRATION NUMBER
NuFarm	Razor / Razor Pro	Glyphosate	228-366
Dupont	Escort XP	Metsulfuron Methyl	352-439
Dupont	Oust XP	Sulfometuron Methyl	352-601
Dow Agrosiences	Garlon 4	Butoxyethyl triclopyr	62719-40

LABELS & MSDS SHEETS:

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

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 variation.

HERBICIDE FACT SHEETS:

Massachusetts DAR Herbicide Fact Sheets are also available on the internet.

1. Open: <http://www.mass.gov/agr/pesticides/rightofway/>
2. Under the **Sensitive Area Materials List** choose the **Active Ingredient(s)** present in the product you are querying.

Hard copies of any of these documents may also be obtained by contacting AMEC Earth & Environmental, attn. Stephen Herzog, (978) 392-5335 or by email at stephen.herzog@amec.com.

APPENDIX B

MAPS

Maps of sensitive areas along the right-of-way which have been updated for 2011 are available for download via a public ftp site (similar to an internet web site). To access the maps, open a Windows explorer window or web browser and enter the following text in the address bar:

`ftp://CSX_YOP_2011:railroad@amftp.amec.com`

(user name is CSX_YOP_2011; password is railroad)

If you have problems accessing the maps, or would like to request printed paper maps for your town, please contact AMEC Earth & Environmental, attention Stephen Herzog, (978) 392-5335, or by email at stephen.herzog@amec.com.