NEW ENGLAND CENTRAL RAILROAD COMPANY 2014 POST- EMERGENT YEARLY OPERATIONAL PLAN MASSACHUSETTS LINE

Prepared For:

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ABSTRACT

This Yearly Operational Plan (YOP) describes the vegetation management operations for the Railroads rights-of-way (ROW) scheduled for vegetation maintenance during this calendar year in compliance with the Commonwealth of Massachusetts ROW 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.

File No. 14-001
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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 3.33 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 right-of-ways maintenance plans.

A yearly Operational Plan (YOP) must be submitted to the Department of Agricultural Resources each year herbicides are intended for use to maintain Rights-of-Way (ROW). The YOP provides a detailed program for vegetation management for that 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 the YOP, the Department publishes a notice in the Environmental Monitor. The applicant must provide 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 the publication of the notice in the Environmental Monitor and receipt of the YOP and Environmental Monitor notice by each municipality.

At least (21) days prior to commencing herbicide application, the railroad, or its designated representative shall submit written notification of the intended spray program and application date to the senior ranking town or city official (Mayor, Town Manager, First Selectman) and conservation commission of each municipality. Formal notification shall be made by registered mail (as per Chapter 85 of Act of 2000), and include the approximate date and time of application. In addition, a conspicuous notice will be published in at least one (1) newspaper of general circulation in each city or town where such land lies at least 48 hours prior to such spraying, release, deposit or application of herbicides.

Any comments on this YOP should be directed to the railroad contact listed on page 1.

MUNICIPALITIES COVERED BY THIS YOP

The following communities are scheduled for post-emergent herbicide treatment in 2014:

Amherst
Belchertown
Erving
Leverett
Monson
Montague
Northfield
Palmer
Sunderland

New England Central Railroad Company ROWs within each of the above communities are shown on site locus diagrams in Appendix F.

SENSITIVE AREA LOCATION MAPS

Location of environmentally sensitive areas are shown on New England Central Railroad Company ROW Maps. These maps are on file with and are available for review at the Massachusetts Department of Agricultural Resources (251 Causeway Street, Suite 500, Boston, MA), the regional offices the Massachusetts Department of Environmental Protection, and the Conservation Commission of each of the affected communities.

YOP REQUIREMENTS AND TABLE OF CONTENTS

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I. LICENSED APPLICATOR

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

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Company Name: Asplundh Railroad Division

Address: 720 County Road 400, Ironton, Ohio, 45638

Telephone #: (740) 532-7035

Contact Person(s): Mr. Raymond Young

II. INDIVIDUALS REPRESENTING APPLICANT AND SUPERVISING THE YOP

New England Central Railroad Company representative supervising the execution of the YOP.

Name & Title: Mr. Shayne Bocash

Address: New England Central Railroad Company, 2 Federal Street, St. Albans, Vermont, 05478

Telephone #: (802) 527-3425

Environmental consultant responsible for the preparation of the YOP

Name: Keith L Morris

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Telephone #: (413) 584-0633

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

Weed Control Herbicide Program for the Roadbed (Post-Emergent)

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 proposed herbicides are in Appendix B.

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Location	Herbicide(s)	Carriers	Application Technique	Application Rate
Sensitive areas Blue zones	2 pts. Rodeo 4 oz Oust Extra 1 pt. Arsenal	30/40 gal water	Low pressure spray	30 gal/acre
Free Spray areas White zones	same	30/40 gal water	Low Pressure Spray	30 gal/acre

Brush Control Program for Areas Adjacent to the Roadbed

Brush control in the free spray areas of the ROW shall be achieved by the low-pressure application of the herbicides and rates listed above. This application of herbicides for brush control shall be done in a very conservative manner, as wetland delineation for the increase in spray has not been performed.

In all other areas, brush control in the ROW shall be achieved by mechanical means. The preferred method of mechanical control utilizes a brush hog that is mounted on a hy-rail vehicle. A brush hog consists of specialized cutting heads mounted on a hydraulic arm, which is capable of pruning high branches and limbs that obstruct communication wires, signals, and the site lines of railroad personnel. Chainsaw and other hand tools may be used when use of the brush hog is not practical.

(revised June 4, 2014)

IV. HERBICIDE APPLICATION TECHNIQUES AND ALTERNATIVE CONTROL PROCEDURES

Herbicide application within the Railroad ROW will be performed using low-pressure application from a specialized high 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. ***The nozzle assemblies are equipped with drip free shut off valves to prevent accidental dripping of herbicide. (See attached detail of nozzle assembly.)***

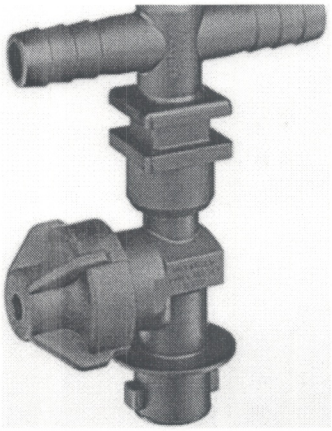
In order to assist in rapid identification of sensitive areas in the field, a pilot vehicle will proceed approximately 1/4 mile ahead of the applicator vehicle in order to signal the location of sensitive areas.

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 from the hoses will not exceed 60 psi.

Alternative Control Procedures

Mechanical means of vegetation control are not feasible within the ballast area of the roadbed. Therefore, vegetation control of the roadbed sections located where herbicide use is prohibited shall be limited to indirect methods such as replacement of trap rock, rails, ties, or manual removal of vegetation.

Touch-up techniques shall be used to 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 the roots growing outside the original treatment boundaries can be managed as selective, foliage, or spot spray. No more than 10% of the initially identified target vegetation on the ROW 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 the YOP (per 11.03[8][C]).



QJ200 Series Diaphragm
Check Valve Quick TeeJet
Nozzle Assemblies

n Available with single, double or triple hose shanks for 3/89, 1/29 and 3/49 I.D. hose.
n Drip-free shutoff with TeeJet ChemSaver®. Opens at 10 PSI (0.7 bar). Standard diaphragm is EPDM with Viton® optional.
n Maximum operating pressure of 125 PSI (9 bar).
n Flow rate: 2.25 GPM (8.5 l/min) at 5 PSI (0.34 bar) pressure drop, 3.18 GPM (12.0 l/min) at 10 PSI (0.69 bar) pressure drop.

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.

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-carry 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 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. For a list of target vegetation see Table One.

VI. MARKING METHODS TO DESIGNATE SENSITIVE AREAS ON THE ROW

Sensitive areas are defined in the Rights-of-Way Management Regulations (333 CMR 11.02) as those areas within the ROW in which public health, environmental, or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects. They include, but are not limited to, the following:

- within the Zone A for any Class A surface water source.
- within the Zone A for any tributary or associated surface water body located outside of the Zone A of a Class A surface water source.
- within 200 feet for 400 feet upstream of a Class B Drinking Water Intake.
- within 100' of any standing or flowing water.
- within 100' of any wetlands.
- within any Riverfront Area.
- within any State-listed Species Habitat.
- within any Certified Vernal Pool Habitat.
- within 100' of any inhabited or agricultural areas.

No Spray areas are those in which herbicide spraying is prohibited. It includes track within a Zone I of a public groundwater source, within 100 feet of any Class A public surface water source, within 100' of any tributary or associated surface water body runs within 400 feet of a Class A surface water source, or within 10' 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, within a lateral distance of 100 feet for 400 feet upstream, on both sides of the river, of any Class B Drinking Water Intake, a 50-foot radius around a private well, 10' from the edge of standing or flowing water or wetlands, within 10' of the mean annual high water line or any River, or within 10' of any certified vernal pool.

Limited spray areas are those in which spraying is restricted to one annual application of herbicides through low-pressure foliar techniques. This includes any Zone II or IWPA, a distance of between 100 feet and 400 feet of any Class A Surface Water Source, a distance of between 10 feet 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, a lateral distance of between 100 feet and 200 feet for 400 feet upstream, on both sides of the River, of a Class B Drinking Water Intake, a distance of between 50 feet and 100 feet of any identified private well, a distance of between 10 feet and 100 feet of any Wetlands or Water Over Wetlands, a distance of between 10 feet from the mean annual high water line of any river and the outer boundary of the Riverfront Area, a distance of between 10 feet of any Certified Vernal Pool and the outer boundary of any Certified Vernal Pool Habitat, and a distance of 100 feet of any Agricultural or inhabited area.

Spraying within water supply areas is restricted to one application every other year of a herbicide through low-pressure foliar techniques. Herbicides were not applied to these areas in 2013; therefore, application **will** take place in 2014.

Non-sensitive areas which are upland areas and/or lengths of track without proximate sensitive areas 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.
- color-coded signs attached to railroad ties.
- color-coded painted rail sections.

Wetland, Watercourses and Waterbodies

Yellow - Limits of No Spray Zone. Represents a point on the railroad tracks that is a minimum of 10 feet away from an area subject to protection under the Massachusetts Protection Act (MWPA) 310 CMR 10.02 (1) (a)-(e) (bordering vegetated wetlands, streams, ponds, etc.)

Blue - Limits of Buffer Zone and Restricted Spray Zone. Represents a 100-foot buffer zone from a resource area. In restricted spray zones, only DAR recommended herbicides can be applied selectively by a low pressure (60 psi) foliar or stem application.

White - Sensitive area warning maker. This color indicates that the applicator is either entering or leaving a restricted spray zone. For wetland areas, white markers are always adjacent to a blue tie.

See Appendix A of this document for clarification. It should be noted that a blue and yellow plate on the outside of the tie represents a no spray zone on that side only.

Public and Private Water Supplies

Red - Zone 11 or private well recharge zone or buffer zone of public surface water supply. This color indicates that the applicator is in an aquifer recharge zone or the buffer zone of a public surface water supply. In this zone only, DFA recommended herbicides can be applied by a low pressure foliar or stem applications with a minimum of 24 months between applications.

Yellow - Limits of No Spray Zone. Represents a point on the railroad tracks that is a minimum of 400 feet from public groundwater supply wellheads; 100 feet from surface water supplies; or 50 feet from a private drinking water well.

White - Sensitive area warning marker. This color indicates that the applicator is either entering or leaving a restricted spray zone.

See Appendix A of this document for clarification. For public and private water supply herbicide application, white and yellow markers are always adjacent to a red marker. Red zones can only be sprayed once every 24 months. **These areas will be sprayed in 2014.**

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 herbicides 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 mixture on non-porous surfaces, such as pavement or concrete.

Sources of Water and Safeguards to Prevent Contamination

Water used for the herbicide mixture will be obtained from hydrants and freshwater sources. During the preparation of the herbicide mixture 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 waterbodies 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 Herbicide Wastes

Disposal of all herbicide 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. 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:

Herbicide Label

Herbicide Fact Sheet

Herbicide Material Safety Data Sheet

Herbicide Manufacturer	
Dupont	(800) 424-9300
Monsanto	(314) 694-4000
American Cyanamid	(201) 835-3100
Griffin L.L.C.	(888) 324-7598
Nufarms Americas Inc.	(800) 345-3330
BASF Corporation	(800) 832-4357
Massachusetts Pesticide Bureau	(617) 626-1700
Massachusetts Department of Environmental Protection	(888) 304-1133
Chem Tree	(800) 424-9300
EPA Pesticide Hotline	(800) 858-7378
Massachusetts Poison Control Center	(800) 682-9211
Massachusetts Department of Public health Board of Environmental Health Assessment Toxicological Program	(617) 624-5757
Local community Chief of Police and/or Fire Department	Appendix E

APPENDIX A

Figures

APPENDIX B

Material Safety Data Sheets &
Herbicide Fact Sheets for Rodeo, Oust Extra, and Arsenal

APPENDIX C

Sample Labels of Rodeo, Oust Extra, and Arsenal

APPENDIX D

Asplundh Railroad Division's
Emergency Procedure Guidelines

APPENDIX E

Emergency Contact Numbers

APPENDIX F

Site Loci & Private Wells Registered with the Massachusetts Department of Agricultural Resources