

Keolis Commuter Services 2020 Yearly Operational Plan, prepared in accordance with the Massachusetts Rights-of-Way Management Regulations (333 CMR 11.00), can be found at:

FDCerailroadvegetation.com

- ➡ KEOLIS Commuter Services
 - ➡ Environmental Monitor Notice
 - ➡ 2020 Yearly Operational Plan
 - ➡ "YOUR MUNICIPALITY"
 - ➡ Right-of-Way Maps

The Integrated Vegetation Management activities proposed in the 2020 Yearly Operational Plan (YOP) for the Commuter Rail includes both mechanical and chemical controls. The mechanical controls (brush and tree clearing, trimming, removal), stump and basal treatments, vegetation clearing from Right-of-Way track drainage ditches, post emergent (non-sensitive areas) and touch up of herbicide is scheduled throughout the year. The ROW pre-emergent chemical application is scheduled weather depending from May 1 through June 30, 2020.

The Right-of-Way (ROW) Maps for each city/town reflect the chemical application zones approved through the five-year Vegetation Management Plan permit issued for 2015-2020. The identification on the maps of private drinking water supply wells remains an ongoing process. Please notify Fair Dermody Consulting Engineers, Keolis and the Department of Agricultural Resources of any omissions and or new private drinking water supply wells.

Please review your mailing address and the ten-digit police department emergency telephone number listed in the Plan and notify us of any revisions. Hard copies of all documents are available upon request, please email Tim@FDCEngineers.com.



FAIR DERMODY
CONSULTING ENGINEERS

15 July 2020

Winchester Conservation Commission
Winchester Town Hall
71 Mt. Vernon Street
Winchester, MA 01890

Re: Request for Determination of Applicability (RDA)
MBTA Right-of-Way Operated by Keolis Commuter Services (Purple Lines)

Dear Commission Members:

On behalf of the Massachusetts Bay Transportation Authority ("MBTA") and Keolis Commuter Services, LLC. ("Keolis") owner and operator of the Commuter Rail passenger service in Massachusetts, FDCEngineers is submitting the enclosed RDA for the review of the wetland map(s) along the railroad right-of-way (ROW) within your community as part of the renewal of the five-year Vegetation Management Plan (VMP).

Keolis is obligated under Federal regulation to implement controls for vegetation along the railroad Right-of-Way ("ROW"). Under the jurisdiction of the Rights of Way Management Program [333 CMR 11.00], Keolis implements a Vegetation Management Plan ("VMP") approved every five years by the Massachusetts Department of Agricultural Resources (MDAR) in consultation with a multi-agency Advisory Council including the Massachusetts Department of Environmental Protection (MassDEP). The objective of the VMP is to eliminate, control and manage vegetation along the ROW that represents *"any real or potential condition that can cause injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a public transportation system; or damage to the environment"* as required by the Federal Transit Administration ("FTA") and Federal Railroad Administration ("FRA") to ensure safe operations and in doing so, ensure the protection of the general interests of the Commonwealth of Massachusetts. [49 CFR 673.5; 49 CFR 237].

By way of background information, the final Rights of Way Management regulation effective since 1987 [333 CMR 11.00] was the result of an extensive review initiated by the Department of Food and Agriculture (DFA) in consultation with a technical advisory task force of environmentalists, state agencies and rights of way managers who assisted in the General Environmental Impact Report (GEIR) preparation. Based on results of the study, they recommended to the Secretary of Environmental Affairs a framework for a *coherent state-wide rights of way regulatory program*. During the GEIR process, MassDEP and DFA (now MDAR) worked closely to include provisions which give maximum protection for water supplies and provide protection for wetlands as prescribed within M.G.L. c. 131, § 40 and 310 CMR 10.00. Specifically, the Rights of Way Management regulations presume that work performed in accordance with a VMP [Vegetation Management Plan] and YOP [Yearly Operational Plan], as required under the 333 CMR 11.00 regulations, **will not alter an area subject to protection under M.G.L. c. 131, § 40.**

In 2016, your commission approved the attached wetlands map for the section of land adjacent to the railroad Right-of-Way (ROW). The determination that was issued has allowed Keolis to conduct vegetation management activities over the last five years in accordance with the 333 CMR 11.00 and Keolis' Vegetation Management Plan (VMP). Each year since the determination was issued, you have been supplied with Keolis' Yearly Operational Plan (YOP) and ROW map(s) including the wetlands locations and sensitive receptors.

15 July 2020

Keolis is currently in the process of renewing the five-year VMP that will expire on December 31, 2020. In accordance with the Wetlands Protection Act, RDA's issued for work conforming to 333 CMR 11.00 are in effect for the five-year life of the VMP and must be renewed with the VMP. Accordingly, enclosed please find the RDA to renew the wetland map(s) along the ROW in your municipality. The enclosed map(s) represent the location of the permanent marking setbacks prescribed by 333 CMR 11.00 to protect the resources in your community. There are no proposed changes to the existing maps and permanent markings in the field from the previous filing. The map(s) included in the filing are provided in USGS 1:25,000, as required by 333 CMR 11.02. The maps have been revised to reflect the latest revisions to all surface/drinking water supply zones as identified on maps supplied by MassGIS.

The safety of employees, passengers and neighboring communities is of high priority. Nonetheless, while the VMP railroad maintenance activities objective is to eliminate, control and manage vegetation along the rail ROW, these maintenance activities are executed with consideration of neighboring communities and the environment. To review the Vegetation Management Plan for the period of 2021-2025 please visit www.fdcerrailroadvegetation.com.

In the interests of the Commonwealth of Massachusetts and in accordance with M.G.L. c. 131, § 40, upon review of the enclosed RDA, please consider the following negative determination on WPA Form 2:

- Number (2) determination: "The work described in the Request is within an area subject to protection under the Act, but will **not remove, fill, dredge, or alter that area**. Therefore, said work does not require the filing of a Notice of Intent"; or
- Number (5) determination citing as exemption 310 CMR 10.02(2)(a)(2) "activities conducted to ***maintain***, repair or replace, but not substantially change or enlarge ***an existing and lawfully located structure or facility used in the service of the public..***".

If you have any questions, please do not hesitate to call Clary Coutu at (617) 874-6946 (clary.coutu@Keoliscs.com) and or you may reach me at (207) 747-4651 (tim@FDCEngineers.com).

Very truly yours,
FDCEngineers



Tim Dermody, EI
President

Enclosure

cc: Clary Coutu, Keolis
Janis O. Kearney, MBTA
Regional Office, DEP



WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Clary Coutu, Keolis Commuter Services, Director of ENV	Clary.coutu@keoliscs.com	
Name	E-Mail Address	
N/A		
Mailing Address	MA	02210
470 Atlantic Avenue, Suite 500	State	Zip Code
City/Town		
Boston		
Phone Number	Fax Number (if applicable)	

2. Representative (if any):

Fair Dermody Consulting Engineers		
Firm		
Tim Dermody	tim@fdcengineers.com	
Contact Name	E-Mail Address	
19 Ocean Avenue, Unit 5	ME	04103
Mailing Address	State	Zip Code
Portland		
City/Town		
207-747-4651		
Phone Number	Fax Number (if applicable)	

B. Determinations

1. I request the Winchester make the following determination(s). Check any that apply:
Conservation Commission

- a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Name of Municipality

- e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).



WPA Form 1- Request for Determination of Applicability
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

N/A	Winchester
Street Address	City/Town
N/A	N/A
Assessors Map/Plat Number	Parcel/Lot Number

b. Area Description (use additional paper, if necessary):

The attached map is a USGS map of the Commuter Rail Line in your municipality. The map was created using MassGIS and the private well registry provided by the Department of Agricultural Resources. The rail line is depicted by the dark black line with cross hatches, the numbers represent mileposts.

c. Plan and/or Map Reference(s):

USGS Right of Way Maps by Rail Line and Community	July 15, 2020
Title	Date
_____	_____
Title	Date
_____	_____
Title	Date
_____	_____

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

The "work" is related to vegetation management, control and maintenance activities for the years 2021-2025 for the railroad right-of-way [FRA, 49 CFR 237]. The Vegetation management plan for the railroad incorporates the Integrated Pest Management (IPM) approach towards promoting a safer railroad for employees, passengers, and neighboring communities by means of implementing various approaches towards removal of nuisance vegetation along the ROW. This work includes both chemical and mechanical controls as represented within the VMP available for viewing at fdcrailroadvegetation.com. The attached previously approved wetland maps are provided for your review and final maps will be incorporated into the VMP as part of the Rights of Way Management Program 333 CMR 11.00 which incorporates 310 CMR 10.03 (6) to ensure protection of resource areas within your community.



WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. Project Description (cont.)

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

310 CMR 10.02 (2)(a)(2) - "activities conducted to maintain, repair or replace, but not substantially change or enlarge an existing and lawfully located structure or facility used in the service of the public..." in accordance with Presumption for the application of Herbicides 310 CMR 10.03 (6) (b) - Any application of herbicides within the Buffer Zone, other than as provided in 310 CMR 10.03(6)(a), shall be presumed not to alter and Area Subject to Protection under M.G.L. c. § 40,...

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- Single family house on a lot recorded on or before 8/1/96
- Single family house on a lot recorded after 8/1/96
- Expansion of an existing structure on a lot recorded after 8/1/96
- Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96
- New agriculture or aquaculture project
- Public project where funds were appropriated prior to 8/7/96
- Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- Residential subdivision; institutional, industrial, or commercial project
- Municipal project
- District, county, state, or federal government project
- Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)



WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

Massachusetts Bay Transportation Authority (MBTA: ATTN. Janis O Kearney)

Name

10 Park Plaza Suite 1607

Mailing Address

Boston

City/Town

Massachusetts

State

02210

Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Signature of Applicant

Signature of Representative (if any)

Date

July 15, 2020

Date

KEOLIS

OPERATOR OF
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
COMMUTER RAIL SYSTEM

470 ATLANTIC AVENUE
BOSTON, MA 02116

2020

YEARLY OPERATIONAL PLAN

PREPARED BY:

FAIR DERMODY CONSULTING ENGINEERS
19 OCEAN AVENUE, UNIT 5
PORTLAND, MAINE 04103

ABSTRACT:

This Yearly Operational Plan (YOP) describes the vegetation management operations for the Railroad's rights-of-way (ROW) 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. It includes the Integrated Vegetation Management approach being followed for the year referenced.

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INTRODUCTION TO THE PROGRAM

The Commuter Rail transports over a million passengers every year. In recent years, an increase in natural hazards, fallen vegetation, and slippery rail has become a significant concern. Extreme weather events such as high winds, blizzards, ice, and heavy rain exacerbate the problem of falling vegetation that has encroached on the ROW. With this ever-increasing threat to safety and infrastructure, Massachusetts Bay Transportation Authority (MBTA) and Keolis have determined that the control of large canopies over the ROW and adjacent shoulder area must be addressed and maintained as described within the five year Vegetation Management Plan. Large canopies and encroaching tall woody vegetation pose a high risk to regular operations by obstructing required locomotive and personnel line-of-sight along the ROW, in curves, at grade crossings, and signals. Visibility is critical to safe operations, and to the public navigating the many grade crossings throughout the Commonwealth every day.

Federal and State laws require railroads to manage vegetation on their rights-of-way:

The Code of Federal Regulation - CFR 213.37 Vegetation.

Vegetation on railroad property which is on or immediately adjacent to roadbed shall be controlled so that it does not -

1. *Become a fire hazard to track-carrying structures;*
2. *Obstruct visibility of railroad signs and signals:*
 - a. *Along the right-of-way, and*
 - b. *At highway-rail crossings; (This paragraph (b)(2) is applicable September 21, 1999.)*
3. *Interfere with railroad employees performing normal trackside duties;*
4. *Prevent proper functioning of signal and communication lines; or*
5. *Prevent railroad employees from visually inspecting moving equipment from their normal duty stations.*

Massachusetts General Laws, Part I, Title XXII, Chapter 160, Section 235A

Every railroad corporation shall, between April first and December first in each year, keep the full width of all its locations, to a point two hundred feet distant from the center line on each side thereof, clear of dead leaves, dead grass, dry brush or other inflammable material...

Massachusetts Department of Environmental Protection and Department of Agriculture developed 333 CMR 11.00: Rights of Way Management "to establish a state wide and uniform regulatory process which will minimize the uses of, and potential impacts from herbicides in rights-of-way on human health and the environment while allowing for benefits to public safety provided by the selective use or herbicides."

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.

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On August 28, 2015, Keolis's Vegetation Management Plan (VMP) was submitted to the Massachusetts Department of Agricultural Resources (DAR). The VMP was reviewed through a series of advertised public comment periods and meetings. The Conservation Commission, Board of Health, and Board of Selectmen or Mayor in each community was notified. No comments were received from the public, or individual communities. The VMP was approved April 26, 2016.

A Yearly Operational Plan (YOP) is required to be submitted to the Department of Agricultural Resources every year herbicides are intended for use to maintain rights-of-way. The YOP provides the Integrated Vegetation Management program for that calendar year that incorporates chemical application and mechanical controls. The YOP is a companion document to the DAR approved Vegetation Management Plan (VMP). The VMP is the long-term management plan for the railroad which describes the intended program for vegetation control over a five-year period and includes both the chemical application and the manual and mechanical controls implemented through an Integrated Vegetation Management (IVM) approach.

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 under separate cover 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.

The activities this YOP details are critical to the safety of employees, the passengers, and the communities the commuter rail passes through each day. To maintain and improve safety for all involved, the YOP is intended to:

- Clear the hazards of vegetation encroachment on the ROW for the safe passage of trains and their passengers.
- Reduce the incidence and effects of "slippery rail", caused by falling vegetation and vegetation growing adjacent to and/or in the roadbed.
- Remove and/or trim at-risk trees and other vegetation before snow, ice, and/or high winds bring them down onto the ROW.
- Maintain the pole lines, fiber optic cable, and the positive train control system along the ROW free of vegetation hazards to ensure reliability of operations.

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- Improve the line-of-sight at crossings along the ROW by removing and or trimming hazardous vegetation that has encroached on the ROW.

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ANY COMMENTS ON THIS YOP SHOULD BE DIRECTED TO:

Tim Dermody
Fair Dermody Consulting Engineers
19 Ocean Avenue, Suite 5
Portland, ME 04103
(207) 747-4651 ex. 4
Tim@FDCEngineers.com

AND

Clary Coutu
Director of Environmental Services,
Compliance and Sustainability
Keolis Commuter Services
(617) 222-8009
Clary.Coutu@keolis.com

KEOLIS

I. INTEGRATED VEGETATION MANAGEMENT CONTRACTORS

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

Company Name RWC, Inc.
Address Lockhouse Road
P.O. Box 876
Westfield, MA 01086
Telephone # (413) 562-5681
Contact Person(s) Brian Chateauvert

Company Name Northern Tree Service
Address 1290 Park Street
Palmer, MA 01069
Telephone # (800) 232-6132
Contact Person(s) Tim Lamotte

II. INDIVIDUAL REPRESENTING APPLICANT & SUPERVISING THE YOP

Individual supervising execution of the YOP and representing the railroad.

Name & Title Clary Coutu, Director Environmental Services,
Compliance and Sustainability
Address Keolis Commuter Services, LLC.
470 Atlantic Avenue
Boston, MA 02116
Telephone # (617) 222-8009

KEOLIS

III. MUNICIPALITIES THE TREATMENT DESCRIBED WILL BE MADE

Maps of the individual municipalities affected by this Yearly Operational Plan can be found at:

FDCErrailroadvegetation.com

➔ KEOLIS Commuter Services

➔ "YOUR MUNICIPALITY"

➔ Right-of-Way Maps

Abington	Hanson	Quincy
Acton	Haverhill	Randolph
Andover	Hingham	Raynham
Ashland	Holbrook	Reading
Attleboro	Hopedale	Revere
Avon	Ipswich	Rockport
Ayer	Kingston	Rowley
Bellingham	Lakeville	Salem
Belmont	Lawrence	Salisbury
Beverly	Leominster	Saugus
Billerica	Lincoln	Scituate
Boston	Littleton	Shirley
Boxborough	Lowell	Somerville
Braintree	Lunenburg	Southborough
Bridgewater	Lynn	Stoughton
Brockton	Malden	Swampscott
Brookline	Manchester	Taunton
Cambridge	Medford	Tewksbury
Canton	Melrose	Wakefield
Chelsea	Middleborough	Walpole
Cohasset	Milford	Waltham
Concord	Millbury	Wellesley
Dedham	Milton	Wenham
East Bridgewater	Natick	West Bridgewater
Easton	Needham	Westborough
Everett	Newbury	Weston
Fitchburg	Newburyport	Westwood
Framingham	Newton	Weymouth
Franklin	Norfolk	Whitman
Gloucester	North Andover	Wilmington
Grafton	Norwood	Winchester
Halifax	Plymouth	Woburn
Hamilton	Plympton	Worcester

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IV. HERBICIDES, APPLICATION RATES, CARRIERS, & ADJUVANTS

PROGRAM FOR THE ROADBED

The post-emergent herbicide program is designed to keep the ballast section and shoulder, yards, switches, signals, and grade crossings weed free. Areas scheduled for weed control treatments have been inspected for density of target vegetation to determine appropriate control methods.

Location	Herbicide(s)	Carriers or Adjuvants	Application Technique	Application Rate
Sensitive area buffer zone	Aquaneat Milestone Spider or Oust XP	Spreader Sticker	Foliar	2 qts/acre
			Foliar	7 oz/acre
			Foliar	4 oz/acre
			Foliar	4 oz/acre
			Foliar	8-16 oz/acre
Non-sensitive areas	Aquaneat Milestone Spider or Oust XP	Spreader Sticker	Foliar	2 qts/acre
			Foliar	7 oz/acre
			Foliar	4 oz/acre
			Foliar	4 oz/acre
			Foliar	8-16 oz/acre
Touch-up applications	Aquaneat Milestone Spider or Oust XP	Spreader Sticker	Foliar	2 qts/acre
			Foliar	7 oz/acre
			Foliar	4 oz/acre
			Foliar	4 oz/acre
			Foliar	8-16 oz/acre

PROGRAM FOR AREAS ADJACENT TO THE ROADBED (BRUSH PROGRAM)

The brush control herbicide 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, communication wires and other areas where vegetation represents a hazard to assets and safe operations.

Location	Herbicide(s)	Carriers or Adjuvants	Application Technique	Application Rate
Non-sensitive areas	Aquaneat Milestone Patriot Selective or Escort XP	MSO	Foliar	3-4 qts/acre
			Foliar	10 oz/acre
			Foliar	2 oz/acre
			Foliar	2 oz/acre
			Foliar	8-16 oz/acre
Non-sensitive areas	Garlon 4 or Garlon 4 Ultra	Basal Oil	Basal/CST	3 pts/acre
			Basal/CST	9 pts/acre
			Basal/CST	
Touch-up applications	Aquaneat Milestone Patriot Selective or Escort XP	MSO	Foliar	3-4 qts/acre
			Foliar	10 oz/acre
			Foliar	2 oz/acre
			Foliar	2 oz/acre
			Foliar	8-16 oz/acre

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V. HERBICIDE APPLICATION TECHNIQUES

Herbicide applications within the Railroad right-of-way (ROW) will be performed using low pressure application from a specialized hy-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, a container will be used to catch any accidental dripping of herbicide. It 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 approximately 1/4 mile ahead of the applicator vehicle in order to signal ahead 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.

Touch-up techniques control any target vegetation within the ballast and ROW 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)].

The brush control program is designed to control vegetation in areas adjacent to the shoulder using post-emergent herbicides. The herbicides selected will depend on the species of target vegetation present. The application method will depend on the density of target vegetation and previous mechanical control methods. Shrubs and herbaceous vegetation in these areas will be maintained where possible.

There are several methods for the application of post-emergent herbicides to the target vegetation. The variety of methods allows the applicator to selectively apply the herbicide directly onto the target vegetation. These applications are described below:

FOLIAR: Selective application of the herbicide to the foliage and or stem by low-pressure mechanical spray devices. This type of application is useful on busy, high speed rail lines where the work intervals between trains are too short for slower mechanical methods. Selective foliar application will not be used on vegetation over 12 feet in height, except for side trimming (333 CMR 11.03 (5)). Side trimming, when done with herbicides, is the selective application of the herbicide to target portions of a tree and avoids removal of the entire tree. During side trimming operations in residential areas, the railroads utilize low pressure application techniques and appropriate adjuvants to minimize drift. Experience indicates minimal drift occurs, usually within 5 feet of side trimming operations.

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STEM OR BASAL SPRAYING: Selective application of the herbicide in a petroleum or crop oil base carrier to the lower portion of the main stem (trunk of a tree). The equipment for basal spraying is often a manual-pump apparatus.

CUT SURFACE: Application of herbicide to the stump immediately after a cutting procedure which may include mowing. Traditionally, the herbicide is manually applied directly to the cut stump surface.

VI. ALTERNATIVE CONTROL PROCEDURES

No alternative vegetation control methods are feasible within the track areas of the right-of-way. The IVM approach incorporates manual and mechanical trimming, cutting and removal of target vegetation within the entire ROW where the application of herbicide is prohibited and where vegetation may represent a hazard to assets and safe operations.

Mechanical control techniques include methods involving the use of hand tools, power equipment, and mowing. Mechanical control techniques are limited to woody and brush vegetation and include target vegetation that interferes with the ROW. Mechanical control removes unwanted vegetation in areas restricted for herbicide application and the areas adjacent to the roadbed and outside of the limit of herbicide application. Trees and brush interfere with pole lines, signal structures, low voltage power lines, communication and signal lines, reduce visibility, and intrude into the track zone.

An arborist works closely with the contractor and Keolis personnel to identify at risk and hazardous trees, vegetation for removal, and invasive species. Dead or dying, extensively decayed, or unstable trees are hazardous and shall be cut and removed. Cutting is used for trees having a diameter greater than six inches or in restrictive locations where other mechanical methods are not viable. All trees and brush identified as interfering with safe operations, personnel performing their duties, and public safety shall be trimmed within the ROW.

Mowing is the mechanical process of cutting a woody target species with cutting heads. Mowing is commonly used for trees having a diameter of less than six inches. These machines can be mounted on off-track, on-track, or hy-rail equipment. The railroad strives to limit the amount of mowing and/or cutting by maintaining as much of the right-of-way with herbicide applications.

VII. IDENTIFICATION OF TARGET VEGETATION

Prior to a herbicide application, a review will be made noting location, density, and type of vegetation present along ROW. 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 CFR 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:

KEOLIS

- 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 the ROW and adjacent to the shoulder will be trimmed, cut, or removed to promote the growth of low growing shrubs. Targeted woody vegetation will be that which has the potential to block visibility, increase slippery rail conditions, or invade the roadbed and overhead communication lines, and generally increases risk to safe operations. Target vegetation will include but not be limited to the following:

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

VIII. 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.

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

- (a) any Zone II 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; and
- (i) 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 a 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
- 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 area 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 zone |

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IX. PROCEDURES FOR HANDLING, MIXING, & LOADING OF HERBICIDES

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.

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X. HERBICIDE FACT SHEETS, HERBICIDE LABELS, AND S.D.S. SHEETS

Below is a list of herbicides potentially in use by this Yearly Operational Plan. For the exact products used in this year's program please refer to page 4 of this document.

MANUF.	PRODUCT NAME	ACTIVE INGREDIENT(S)	EPA REGISTRATION #
BASF AG PRODUCTS	ARSENAL R.R. HERBICIDE	ISOPROPYLAMINE SALT OF IMAZAPYR	241-273
DOW AGRO-SCIENCES	MILESTONE	AMINOPYRALID	62719-519
DOW AGRO-SCIENCES	OPENSIGHT	AMINOPYRALID & METSULFURON METHYL	62719-597
DOW AGRO-SCIENCES	GARLON 4	TRICLOPYR	62719-40
DOW AGRO-SCIENCES	GARLON 4 ULTRA	TRICLOPYR	62719-527
BAYER ENVIRO. SCIENCE	ESCORT XP	METSULFURON METHYL	432-1549
BAYER ENVIRO. SCIENCE	OUST EXTRA	SULFOMETURON METHYL & METSULFURON METHYL	432-1557
BAYER ENVIRO. SCIENCE	OUST XP	SULFOMETURON METHYL	432-1552
NU FARM SPC. PRODUCTS	AQUANEAT	GLYPHOSATE	228-366
NU FARM SPC. PRODUCTS	PATRIOT	METSULFURON METHYL	228-391
NU FARM SPC. PRODUCTS	POLARIS AC COMPLETE	IMAZAPYR	228-570
NU FARM SPC. PRODUCTS	SPYDER EXTRA SELECTIVE	SULFOMETURON METHYL & METSULFURON METHYL	228-690
NU FARM SPC. PRODUCTS	SPYDER SELECTIVE	SULFOMETURON METHYL	228-408
NU FARM SPC. PRODUCTS	RAZOR PRO	GLYPHOSATE	228-366

LABELS & S.D.S. SHEETS:

The labels and S.D.S. sheets for the above products can be found by:

1. Open your internet browser and enter the following address in the **Address bar**:
<http://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:

Herbicide fact sheets for the above products can be found by:

1. Open your internet browser and enter the following address in the **Address bar**:
<http://www.mass.gov/eea/agencies/aqr/pesticides/rights-of-way-sensitive-area-materials-list.html>
2. Choose the link that corresponds to the **Active Ingredient** present in the product.

Hard copies of any of these documents may also be obtained by calling Fair Dermody Consulting Engineers at (207) 747-4651

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XI. EMERGENCY CONTACTS

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

Herbicide Label

Herbicide Fact Sheet

Herbicide Safety Data Sheet

Herbicide Manufacturer

BASF Ag Products (800) 545-9525

Dow AgroSciences (800) 992-5994

Bayer Environmental Sciences (866) 992-2937

Nufarm Turf & Specialty (800) 345-3330

Massachusetts Pesticide Bureau (617) 626-1784

Massachusetts DEP Emergency Response (888) 304-1133

Chemtrec (800) 262-8200

EPA National Pesticide Information Center (800) 858-7378

Massachusetts Poison Control Center (800) 222-1222

Local Community Chief of Police and/or Fire Chief:

Abington	(781) 878-3232	Hanson	(781) 293-4625	Quincy	(617) 479-1212
Acton	(978) 263-2911	Haverhill	(978) 373-1212	Randolph	(781) 963-1212
Andover	(978) 475-0411	Hingham	(781) 749-1212	Raynham	(508) 824-2716
Ashland	(508) 881-1212	Holbrook	(781) 767-1212	Reading	(781) 944-1212
Attleboro	(508) 222-1212	Hopedale	(508) 473-8444	Revere	(781) 284-1212
Avon	(508) 587-4207	Ipswich	(978) 356-4343	Rockport	(978) 546-3444
Ayer	(978) 772-8200	Kingston	(781) 585-0523	Rowley	(978) 948-7644
Bellingham	(508) 966-1515	Lakeville	(508) 947-4425	Salem	(978) 744-1212
Belmont	(617) 993-2501	Lawrence	(978) 794-5900	Salisbury	(978) 465-3121
Beverly	(978) 922-1212	Leominster	(978) 534-4383	Saugus	(781) 233-1212
Billerica	(978) 667-1212	Lincoln	(781) 259-8113	Scituate	(781) 545-1212
Boston	(617) 247-4200	Littleton	(978) 952-2316	Shirley	(978) 425-2642
Boxborough	(978) 263-3000	Lowell	(978) 937-3200	Somerville	(617) 625-1600
Braintree	(781) 843-1212	Lunenburg	(978) 582-4531	Southborough	(508) 485-2147
Bridgewater	(508) 697-0914	Lynn	(781) 595-2000	Stoughton	(781) 344-2424
Brockton	(508) 941-0200	Malden	(781) 322-1212	Swampscott	(781) 595-1111
Brookline	(617) 730-2222	Manchester	(978) 526-1212	Taunton	(508) 824-7522
Cambridge	(617) 349-3300	Medford	(781) 395-1212	Tewksbury	(978) 851-7373
Canton	(781) 828-1212	Melrose	(781) 665-1212	Wakefield	(781) 245-1212
Chelsea	(617) 884-1212	Middleborough	(508) 947-1212	Walpole	(508) 668-1095
Cohasset	(781) 383-1055	Milford	(508) 473-1113	Waltham	(781) 893-3700
Concord	(978) 318-3400	Millbury	(508) 865-3521	Wellesley	(781) 235-1212
Devens	(978) 772-4600	Milton	(617) 698-3800	Wenham	(978) 468-4000
Dedham	(781) 326-1212	Natick	(508) 647-9500	W. Bridgewater	(508) 586-2528
E. Bridgewater	(508) 378-7223	Needham	(781) 444-1212	Westborough	(508) 366-3060
Easton	(508) 230-3322	Newbury	(987) 499-3907	Weston	(781) 893-4803
Everett	(617) 389-2120	Newburyport	(978) 462-4411	Westwood	(781) 326-1903
Fitchburg	(978) 345-4355	Newton	(617) 796-2100	Weymouth	(781) 335-1212
Framingham	(508) 872-1212	Norfolk	(508) 528-3232	Whitman	(781) 447-7666
Franklin	(508) 528-1212	North Andover	(978) 683-3168	Wilmington	(978) 658-3331
Gloucester	(978) 283-1212	Norwood	(781) 762-6888	Winchester	(781) 729-1214
Grafton	(508) 839-2858	Plymouth	(508) 830-4218	Woburn	(781) 933-1212
Halifax	(781) 293-5761	Plympton	(781) 585-3339	Worcester	(508) 799-8600
Hamilton	(978) 468-1212				

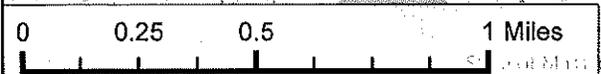
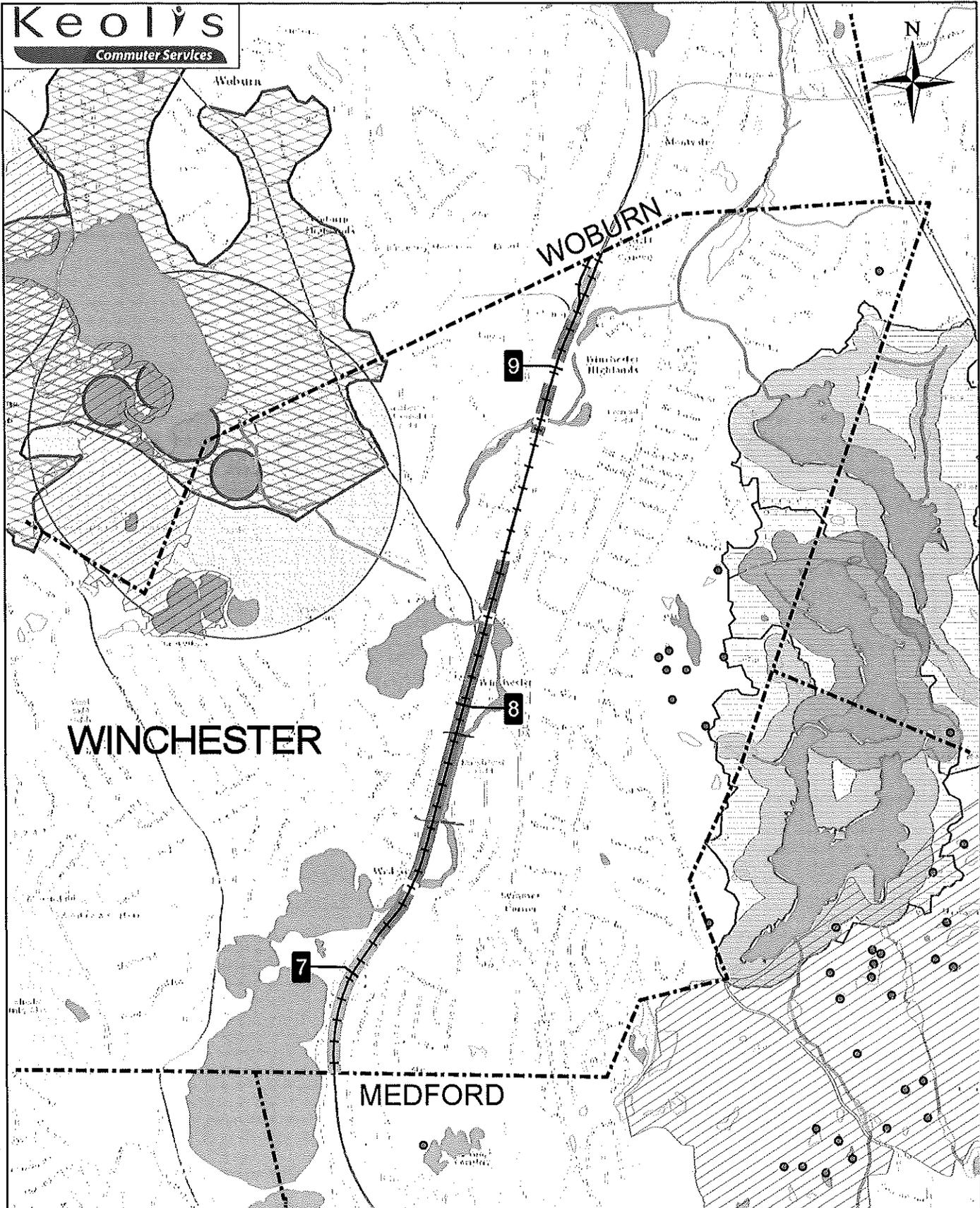
333 CMR: PESTICIDE BOARD 11.02:

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

- (a) any Zone II or IWPA;
- (b) a distance of between 100 feet and 400 feet of any Class A Surface Water Source;
- (c) a distance of 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.



NEW HAMPSHIRE MAIN LINE



Map data: Massachusetts, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

TOWN:	WINCHESTER
DATE:	7/15/2020
SCALE:	1:25,000
SHEET:	1 OF 1

	LIMITED SPRAY ZONE (1 YEAR INTERVAL)
	LIMITED SPRAY ZONE (2 YEAR INTERVAL)
	NO SPRAY ZONE

	DEP APPROVED ZONE I
	DEP APPROVED ZONE II
	IWPA

	ZONE A
	ZONE B
	NHESP PRIORITY HABITATS

	NATIONAL WETLANDS
	CERTIFIED VERNAL POOL