

VEGETATION MANAGEMENT PLAN

FOR:

Fore River Transportation Corporation

For railroad rights-of-way in the Commonwealth of Massachusetts

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I. INTRODUCTION

This Vegetation Management Plan (VMP) has been prepared for Fore River Transportation Corporation and shall apply to their Rights-of-Way (ROW) within the Commonwealth of Massachusetts. It outlines the 5-year plan for managing vegetation as per 333 CMR 11.00 Rights-of-Way Management, latest revision (Appendix B). It describes a variety of operational practices which include mechanical, chemical, and natural methods used to manage, control, and eradicate vegetation on railroad ROWs. The VMP addresses the major components of vegetation management including the rationale for the various techniques, the buffering and protection of sensitive areas, the application of Integrated Vegetation Management (IVM), and an overview of the railroad ROW system. Appendices include a map of Fore River Railroad, the Rights-of-Way Management Regulations 333 CMR 11.00, the Preface to the Wetlands Protection Regulations 310 CMR 10.00 relative to rights-of-way management, and the most recent list of herbicides approved for use on sensitive areas of railroad ROWs, subject to revision.

The Fore River Railroad is owned by the Massachusetts Water Resources Authority and operated under contract by the Fore River Transportation Corporation. It is 2.7 miles of railroad that runs from Quincy Point to the Greenbush Commuter Line in Braintree. Quincy and Braintree are the only municipalities affected by this plan.

Over the past five years, vegetation management on the Fore River Railroad has been limited to a once per year herbicide application twelve feet from the centerline of all tracks, along with minimal mechanical control to vegetation overhanging the roadbed and trees with potential to impact the safety and operation of the railroad.

The VMP represents careful planning, programming, and decision making by a team of qualified professionals so that the general welfare and safety of railroad employees and the public is ensured to the extent allowed by the regulations, without undesirable consequences to our environment. The purpose of this VMP is to establish the operations, procedures, and professional guidelines involved in the railroads vegetation management program to control, eradicate, or manage vegetation that interferes with the ROW. This interference may potentially affect the safety of employees, passengers, the public, and the environment. This VMP provides the necessary information and basic operational procedures to inform municipalities, interested citizens, railroad employees, and contractors about the railroad's vegetation management program. The railroads goals and objectives associated with vegetation management are to minimize the risk of unreasonable adverse effects on human health and the environment and to protect the safety of people making passage on, performing work on, or living adjacent to the ROW.

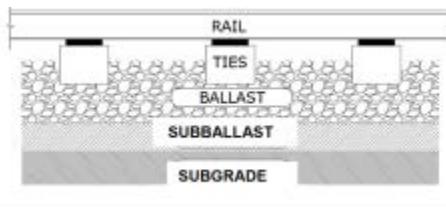
To understand the complexities of the railroad ROW and the related problems which arise with vegetation interfering with the operations of the railroad ROW system, detailed descriptions and illustrations of the specific areas along the railroad ROW are provided in Section IV. Knowledge of the role and function of each area along the ROW is necessary to assess and understand the particular type of vegetation management practice used in those areas.



II. REASONS TO CONTROL VEGETATION ON RAILROAD RIGHT-OF-WAYS

Reasons to control vegetation on railroad ROWs are listed in Chapter 9 Part 1 of the American Railway Engineering and Maintenance-of-Way Association (AREMA), and will be briefly explained in this section.

Vegetation on railroad rights-of-way affects railroad safety both directly and indirectly. The benefits of proper vegetation control, however, are difficult to quantify because vegetation control is one of many tools railroads use to maintain tracks in a safe condition.



The entire railroad roadbed and adjacent area are designed to carry water away from the tracks. Pore space in the ballast allows water to drain away from the ties and into drainage ditches, which carry it away from the track. Over time, vegetation and soil develops in the roadbed.

Because of this, the drainage capacity of the ballast is greatly reduced and moisture is retained around the ties contributing to their decay. During rain, the fouled ballast can retain enough moisture to become saturated. This results in a loss of support for the track both vertically and laterally leading to movement under the train.

In dry weather, vegetation within the roadbed is easily set on fire by a variety of ignition sources. In order to minimize the potential for fires, the Commonwealth of Massachusetts requires by statute (Section 160 Chapter 235A) that railroads keep the full width of their rights-of-way clear of flammable material including vegetation.

An additional problem occurs with the above ground portion of plants growing near the rails. Trains depend on friction between the steel rails and steel wheels for traction and braking. Anything that reduces friction between the wheels and rails can create dangerous problems. Most plant tissues are immediately crushed between the wheel and rail, but release water and plant sap which acts as a lubricant just as rain does and may increase stopping distance.

Vegetation also creates unsafe footing for railroad employees, particularly train crews that may be at work at any hour and in any weather. The vegetation itself may be the hazard or it may conceal objects or areas of unsafe footing.

Visibility is important both for railroad personnel working on or near trains and for motorists crossing railroad tracks. Locomotive engineers and other operating personnel must be able to see all types of railroad signals. These signals indicate the status of the traffic on the track ahead and indicate when whistles must be sounded as the train approaches a road crossing. Signs provide other types of safety information as well. Motorists must be able to see trains as they approach railroad crossings and employees must be able to visually inspect moving rail equipment. Locomotive engineers must be able to see around curves and see that switches and derails are in the correct position. Federal laws require vegetation control to ensure proper functioning of signals and communication lines. Trees and plants can short out electrical equipment and cause failure of communication systems and signals.



Vegetation on railroad rights-of-way indirectly affects railroad safety in a significant way. Vegetation itself is rarely the cause of a railroad accident or incident, but can conceal track and roadbed defects. In 2019, there were 533 accidents nationwide caused by track, roadbed, and structure defects, according to Federal Railroad Administration (FRA) statistics. This resulted in 11 injuries and \$106,101,852 in damage. In these accidents, 266 cars carrying hazardous material were damaged resulting in 14 releases of hazardous material into the environment. For the five-year period of 2015 to 2019 there were 21 train accidents caused by track, roadbed, and structure defects in the Commonwealth of Massachusetts.

Of primary importance to the railroad industry is minimizing the frequency and severity of accidents and incidents. The primary method for controlling those caused by track and roadbed defects is the federally mandated weekly or twice-weekly visual inspections by a qualified track inspector. It is essential that the railroad roadbed be kept weed free to provide the track inspector with unobstructed views of the track structure including rails, ties, and fasteners. Vegetation within the railroad roadbed increases the probability that a track or roadbed defect will go undetected resulting in greater potential for an accident or incident. For this reason, FRA regulations (CFR 49 Part 213.37) require that vegetation be controlled so as not to interfere with the track inspector's duties.

The Federal Government and Commonwealth of Massachusetts Government have recognized the importance of safety and have a variety of laws and regulations governing the condition of railroad ROWs.

Federal law requires railroads to control vegetation. Specifically, 49 C.F.R. Subsection 213.37 states:

Vegetation on railroad property, which is on or immediately adjacent to roadbed, 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*
 - (1) Along the right-of-way, and*
 - (2) At highway-rail crossings*
- (c) Interfere with railroad employees performing normal trackside duties*
- (d) Prevent proper functioning of signal and communication lines*
- (e) Prevent railroad employees from visually inspecting moving equipment from their normal duty stations*

The Massachusetts Department of Public Utilities has broad regulatory authority over railroads. Railroad Safety Regulations 220 CMR 150.00 set forth regulations concerning track inspection, track maintenance, and track alterations.

The statutory and regulatory intent is specific: the safety of the railroad must be guaranteed through inspection, maintenance, and repair of the ROW. Maintenance and inspection require proper vegetation control. Clearly, the Commonwealth has intended each railroad within Massachusetts to maintain their ROWs, which includes but is not limited to vegetation management, or be in violation of law and regulations, and subject to liability and fines.



III. INTEGRATED VEGETATION MANAGEMENT

Integrated Vegetation Management (IVM) involves careful planning, organizing, and implementing an overall program involving all operational departments and personnel, so that all possible techniques of vegetation control will be utilized. By identifying and coordinating routine or operational activities such as repair, tie installation, ballast replacement, construction, communication, and other ROW responsibilities, the railroad can control vegetation as an indirect benefit of their prime goal and function. Thus, unnecessary application of herbicides will be prevented. All non-chemical techniques and methods that remove or manage unwanted vegetation will be identified and integrated into the overall VMP process and the scheduling for all Yearly Operational Plan (YOP) activities. Thus, no sector or area of the ROW will receive herbicide treatment if a routine or operational activity will remove the vegetation during the process. This operational procedure will further reduce the amount of herbicides used each year. Whenever possible and wherever consistent with the ROW system, the railroad will implement an integrated approach to vegetation management by encouraging or maintaining plant communities that hinder the development of target vegetation.

This IVM program utilizes physical, chemical, and natural methods to control vegetation. It addresses public, environmental, and economic concerns by minimizing the applications of herbicides. Due to the unique structure of the railroad ROW, different areas such as road crossings and yards, require different levels of vegetation control and will be selectively managed based on the site and target species. Railroad personnel, consulting engineers, and herbicide application specialists will develop annual YOPs that select those vegetation control methods that minimize risk for the general public and the environment. Over the 5-year period, railroad personnel will monitor and evaluate the success of their program and integrate appropriate new methods in their YOPs consistent with the VMP. Procedures to monitor and evaluate the IVM program are described in detail in Section VII, Operational Guidelines for Applicators Relative to Herbicide Use.

Federal laws require the maintenance of vegetation located on the roadbed and certain other areas. All vegetation will be eliminated from the following areas:

1. Ballast section
2. Ballast shoulder
3. Yards
4. Switches, signals, and signs
5. Highway grade crossings
6. Bridges, bridge abutments, and buildings
7. Off-track areas
8. Inside of curves

To date, no environmentally and economically feasible and safe alternatives to herbicides have been developed for use in areas of the right-of-way requiring total vegetation control. The Massachusetts Railroad Association has tested alternatives without success. These tests included a steam application, which required 7,000 gallons of potable water and several hundred gallons of diesel fuel for heating the water per mile. It resulted in partial control lasting about one week. In another test,



an application of a fish by-product resulted in approximately ten percent control of target vegetation. No mechanical equipment has been developed that will operate in close proximity to the track components in the roadbed area. In 1996, Consolidated Rail Corporation built and tested a mowing machine for target vegetation growing in the roadbed and ballast. This machine was completely ineffective at removing vegetation below the top-of-rail height and fouled the ballast with clippings creating both drainage problems and a fire hazard. Finally, the movement of trains would make manual weed control dangerous. As a result, the integrated approach to vegetation management in these areas is limited to the selective application of herbicides to target vegetation along with control obtained through track maintenance activity.

The use of herbicides, however, continues to drop as the result of new products entering the ROW market allowing for lower rates, as well as new technologies in application equipment. Spray booms are independently controlled according to left side, center, and right side allowing the operator to shut off the application to areas lacking target vegetation. When herbicide use is needed, the type and density of vegetation, site condition, and the time of year will be factors in determining the herbicide type, application rate, adjuvants, and application equipment. These factors will be selected to attain maximum control and minimize any unreasonable adverse effects. Each herbicide treatment will be tailored to the specifics of the site, sensitive area proximity, vegetation, and local environmental factors. The specific details regarding the herbicides to be used will be included in each YOP.

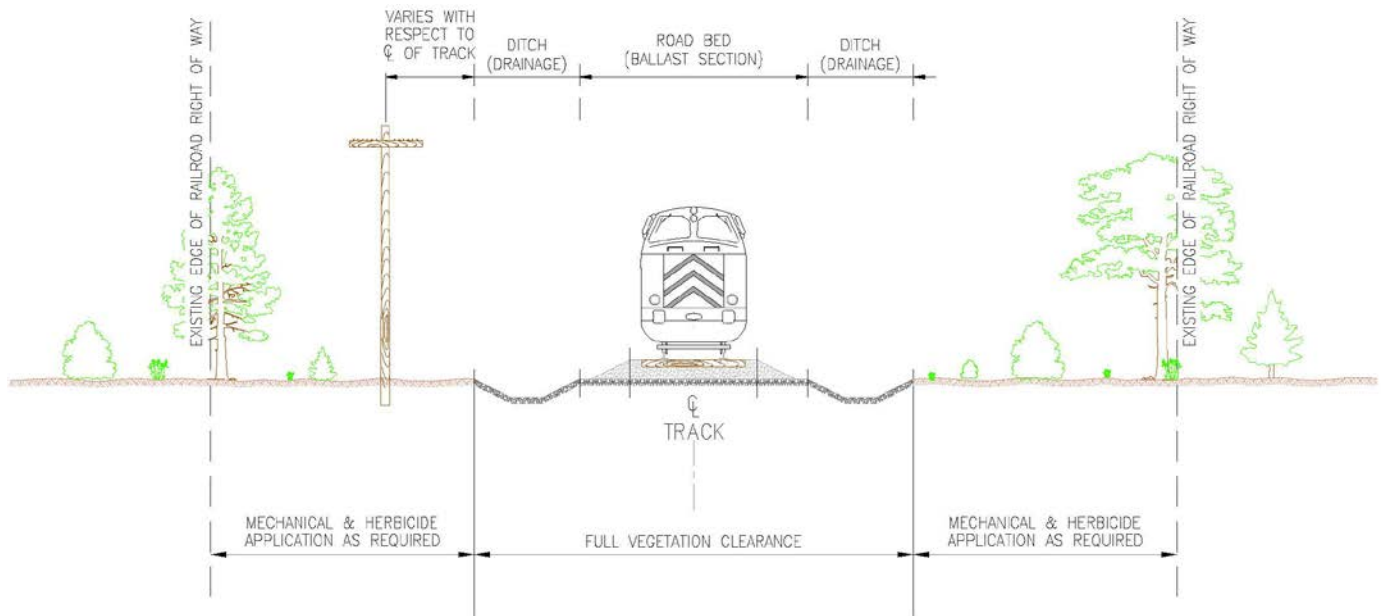
In summation, the railroad's VMP is an integrated vegetation management program. The railroad's vegetation management programs do not rely on a fixed application schedule or eliminate all vegetation with herbicides in all areas. A site inspection, monitoring the vegetation on the roadbed and adjacent areas, is performed on all ROWs. All operational and maintenance activities scheduled for that year will be identified for those sites. If maintenance activities will control and/or negate the need for the vegetation on those sites, no other vegetation management activities will be contracted. On those areas, in which the vegetation will not be controlled by non-VMP activities an assessment will be performed to determine the most selective vegetation management approach (see Operational Guidelines, Section VII).



IV. MANAGEMENT REQUIREMENTS OF RAILROAD RIGHTS-OF-WAY

Target vegetation includes any vegetation along the ROW that has the potential to impact or disrupt railroad operations and utility lines and poles.

FIGURE 1
RAILROAD AREAS REQUIRING VEGETATION CONTROL



A. Roadbed

Figure 1 depicts a typical railroad ROW. The roadbed is a man-made structure which consists of the rail and ties, ballast, ballast shoulder, and its drainage system. The ballast and ballast shoulder are constructed of hard stone that supports the track. It distributes the load on the track evenly and drains water away from the roadbed. The roadbed drainage system is constructed to carry water draining out of the ballast away from the track. The roadbed portion of the ROW requires total vegetation eradication.

B. Bridges

Open deck bridges, such as some over water, will not be treated. Roadbed approaches to bridges will be treated up to the abutment backwall, reduced as necessary to maintain required setbacks to sensitive areas. Stonework in bridge abutments and similar structures must be treated because plant roots can loosen and destroy mortar in cracks. The area under bridges will be maintained in low growing vegetation.

C. Culverts

Culverts are generally constructed with steel pipe, concrete pipe, or stone and are normally placed at right angles to the track. Culverts which are not of sufficient length to extend beyond the roadbed spray pattern plus required buffer, or which are shallow to the roadbed and constructed of stone and could allow herbicide to enter a watercourse, will not be treated.

**D. Ditches**

Drainage ditches must be maintained weed-free to permit the flow of water away from the ballast and track structure and maintain a stable roadbed. Ditches will be maintained by mechanical means and by herbicide applications when no water is present.

E. ROW Area Adjacent to the Shoulder

Woody vegetation growing in areas adjacent to the shoulder will be managed as necessary and the growth of low growing shrubs will be maintained. Targeted tall woody vegetation will be that which has the potential to block visibility or invade the roadbed and/or overhead utility lines.

Figure 1 illustrates typical areas on the railroad ROW area adjacent to the shoulder. These areas are generally between the roadbed and the edges of the ROW on either side. Sides of the ROW containing overhead utility lines, low growing shrubs and most herbaceous plants will be maintained in an effort to reduce the invasion of tall growing trees into these areas. Tall trees growing near overhead utility lines must be managed via mechanical methods. Low growing vegetation will be retained in areas containing underground utility lines. Shrubs in these areas provide a visual screen blocking the view of railroad traffic from adjacent landowners and reduce the noise from rail traffic in the adjacent land. Vegetation on the area adjacent to the shoulder must be controlled in the following situations.

1. Grade Level Road Crossings

At grade level road crossings vegetation must be managed to provide safe lines of sight between motorists and rail traffic.

2. Railroad Signals, Signal Cases, and Signs

The area around railroad signals, signal cases, and signs will be maintained weed free providing a safe line of sight between the locomotive engineer and the signals or signs and to permit maintenance of this equipment.

3. Inside Curves

In the area adjacent to the shoulder, on the inside of curves, vegetation must be maintained to allow railroad employees on the trains the line of sight to inspect trains as they move around the curves.

F. Railroad Facilities

Railroad facilities include yards, buildings, fueling facilities, and off-track areas. Yards are areas with multiple tracks and switches where trains are assembled, disassembled, and equipment is stored. Massachusetts Department of Agricultural Resources (MDAR) has determined that railroad yards are not



considered part of the right-of-way. Whenever possible, the yard tracks are treated as if they were on the right-of-way. Buildings, usually within yards, include offices, maintenance and repair buildings, and signal towers. Fueling areas are locations where fuel for vehicles and maintenance-of-way equipment is stored and distributed. Off-track areas are locations that are not assessable from rail, such as material storage yards and electrical substations. Railroad facilities must be maintained weed free to allow safe and efficient operation, reduce fire hazards, and permit proper inspection of railroad track.

V. VEGETATION MANAGEMENT TECHNIQUES

The vegetation management program is defined and limited by the construction of the privately owned ROW. The individual components of the railroad ROW as described in Section IV, have two distinctly different vegetation management requirements. On the ROW roadbed and other specialized areas, no vegetation is permitted as per Federal and Massachusetts laws and regulations. On the areas adjacent to the roadbed, woody, vine, and shrub species must be selectively managed. Therefore, the methods of railroad ROW management is limited to two basic vegetation control techniques and one indirect method. The two basic vegetation control techniques are herbicide applications and mechanical techniques. The indirect method includes any ROW operational activity that eliminates vegetation as a secondary benefit.

A. Mechanical Equipment and Techniques

Mechanical control techniques are limited to woody and brush vegetation and will include only the target trees that interfere with the ROW. Mechanical techniques are used in the areas adjacent to the roadbed to remove unwanted woody vegetation. Trees and brush interfere with utility lines, reduce visibility, and intrude into the track zone. Mechanical control is a solution to these problems.

Mowing is the mechanical process of cutting a woody target species with cutting heads. The cutting heads are mounted on hydraulic arms that greatly extend the lateral reach of the equipment. These machines can be mounted on off-track, on-track, or hi-rail equipment. Large machines are required for railroad application because of the wide range of conditions found on the ROW. On-track equipment has the advantage of not having to operate over rough terrain. Off-track equipment can work independently of train movement but production may be limited by the difficulty of moving over rough terrain. Off-track equipment also has the advantage of being able to operate under utility lines. However, railroad safety guidelines may restrict the use of brush cutters within developed or recreational areas. Mechanical cutters, such as mowers, present certain safety problems that railroad personnel must take into consideration.

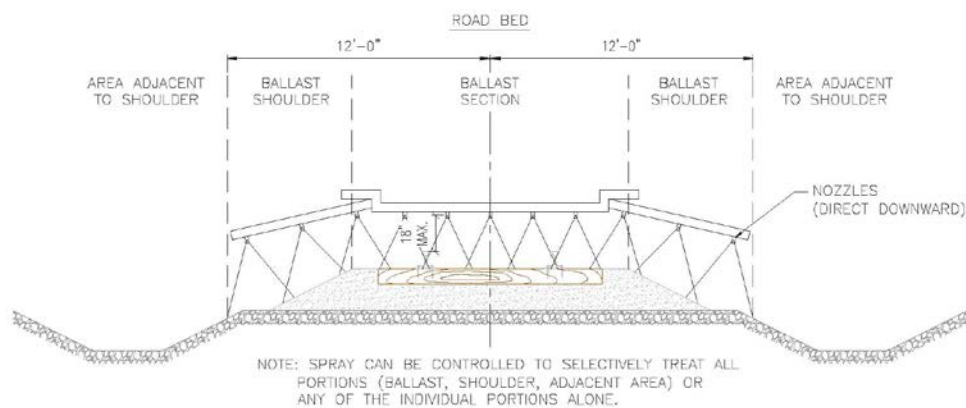
B. Herbicide Application

Herbicides are pesticides used to manage unwanted vegetation. Herbicides have been applied on ROWs to manage vegetation because of their specificity, range of target species, degree of control, economics, and application methods.



Herbicides are essential to eliminate vegetation on the ROW roadbed (the ballast/shoulder area). There is no known mechanical method for adequate vegetation control on the ROW roadbed as required by Federal and Massachusetts laws and regulations. The ballast and shoulder must be free and clear of all vegetation. Therefore, vegetation must be completely killed in the roadbed.

**FIGURE 2 AND 3
REAR MOUNTED BOOM**



The herbicide program involves an annual postemergence application that targets all vegetation within twelve feet from the centerline of all railroad tracks. The application is performed by a hi-rail spray truck. This on-track vehicle has the advantage of not having to operate over rough terrain. These hi-rail trucks have a rear-mounted boom located approximately 18 inches above the ground (Figure 2 and 3). Spray nozzles are equipped with a spring-loaded shut-off valve to prevent dripping when the pressure is turned off.

Only herbicides from Massachusetts Rights of Way Sensitive Area Materials List will be used for herbicide application. The herbicide program will be included in each years YOP.

Herbicide sprayed from hi-rail trucks is applied at low pressure between 30 and 40 (pounds per square inch) PSI. Low pressure as defined by CMR 333 11.02 shall be under 60 PSI.



The herbicide application is designed to eliminate all vegetation located on the roadbed, around signs and signals, and in yards and other railroad facilities. Herbaceous vegetation is the primary cover type with a lesser number of shrubs and tree seedlings also present. The goal of the herbicide program is for complete vegetation eradication within twelve feet of the centerline of all tracks.

All treated areas are later inspected and the effectiveness of the treatment is evaluated. If necessary, a second treatment is selectively applied to vegetated areas (see CMR 333 11.03(8)).

Additional herbicide application may be conducted if vegetation management is required beyond twelve feet from the centerline of the track. The type of herbicide selected for vegetation management in areas adjacent to the shoulder 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 postemergence 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:

a. Foliar:

This is a selective application of the herbicide to the foliage by a variety of low-pressure mechanical spray devices. The herbicides are applied under low pressure (30-40 PSI). 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 will utilize low pressure herbicide application techniques and appropriate adjuvant or agents to minimize the drift of herbicides. Experience indicates minimal drift occurs, usually within 5 feet of side trimming operations, when using low pressure applications and adjuvants.

b. Stem:

Selective application of the herbicide in a basal bark oil to the lower portion of the main stem (trunk of a tree). The equipment for basal spraying is often a manual-pump apparatus.

c. Cut surface:

Application of an herbicide to the stump immediately after a cutting procedure which may include mowing. Traditionally, the herbicide is manually painted or squirted directly onto the cut stump surface.



Summation of Herbicide Application

The annual postemergence herbicide application typically occurs in June of each year. All treated areas are later inspected and evaluated by railroad personnel. If further treatment is needed, a postemergence herbicide is selectively applied to unwanted vegetation. Herbicides applied to control woody vegetation in areas adjacent to the roadbed will begin in May continue throughout the year if needed on selective sections of the ROW as part of the railroad's vegetation management program. Stem and cut surface treatments are effective year round and will be performed as needed. Every consideration will be taken to minimize herbicide use while guaranteeing the overall safety of the ROW system.

The benefits of herbicide applications on the ROW system are important for several reasons. The registration of herbicides specifically labeled for use on ROWs by the EPA and Commonwealth of Massachusetts based on risk analysis is further support for their continued use. When applied by a Massachusetts certified applicator (in the category Right-of-Way Pest Control) according to label direction and in accordance with all Federal and State laws and regulations including an approved VMP and YOP, an herbicide selected from the MDAR/Massachusetts Department of Environmental Protection (MassDEP) recommended list is expected to have no unreasonable adverse effects to the general public and the environment. Public and employee safety begins with the federal and state mandated requirements to visually inspect the entire ROW. Herbicides provide the most reliable and generally safe method to prevent and remove weeds that inhibit said inspections.

Since herbicides are available in a wide variety of dry and liquid forms, the railroad may select the most efficacious herbicide for that particular site and target vegetation. Thus, the target plant may be selectively eradicated while minimizing impacts on non-target, desirable species. Limited, selective application of herbicides minimizes the chance of unreasonable adverse effects to the public and the environment. The applicator controls the pressure, selects the proper nozzle, and has absolute control at which speed the vehicle will travel the ROW.

The applicator is constantly monitoring the environment. If the weather conditions change, such as high wind, rain, temperature, inversion, etc., the applicator will stop immediately.

Massachusetts Regulation 333 CMR 10.14 requires the applicator to keep daily records of herbicide spraying operations. The records include herbicide/adjuvant mixture components and proportions, equipment, rate of application, the exact location of treated and non-treated track and adjacent areas, date of application, trade name of product and EPA registration number, applicator name, and target pest.

Licensed professional applicators with a category 40 license, assisted by on-site railroad personnel, will apply herbicides chosen from the state recommended list [333 CMR 11.04 (1) (d) as applicable] specific for the target vegetation and site. By using state-of-the-art equipment and specific adjuvants, the applicator will efficiently and economically manage the vegetation on the ROW.



VI. SENSITIVE AREAS

Sensitive Areas have been defined in the Commonwealth of Massachusetts Regulation 333 CMR 11.00. A copy of the regulations is included in Appendix "B". Sensitive areas include any areas within the ROW including No Spray Area, and Limited Spray Area as defined below.

No Spray Area, any area that is both within a Right-of-Way and within:

- (a) any Zone I;
- (b) 100 feet of any Class A Surface Water Source;
- (c) 100 feet of any tributary or associated surface water body where the tributary or associated surface water body runs within 400 feet of a Class A surface water source;
- (d) 10 feet of any tributary or associated surface water body where the tributary or associated surface water body is at a distance greater than 400 feet from a Class A surface water source;
- (e) a lateral distance of 100 feet for 400 feet upstream, on both sides of the river, of a Class B Drinking Water Intake;
- (f) 50 feet of any identified Private Well;
- (g) 10 feet of any Wetlands or Water Over Wetlands;
- (h) 10 feet of the mean annual high-water line of any river; and
- (i) 10 feet of any Certified Vernal Pool.

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

- (a) any Zone 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.

The most common types of sensitive areas encountered are areas within 100 feet of standing or flowing water or wetlands.

Those sensitive areas that have been delineated with permanent markers in the field include all areas listed above under No Spray Areas and Limited Spray Areas with the following exceptions: agricultural areas, inhabited areas, and areas of intermittent standing or flowing water such as in drainage ditches. These areas are considered readily identifiable in the field and are not delineated with permanent markers.



Within "sensitive areas" only a limited number of herbicides that have been approved for these areas by MDAR and MassDEP can be applied. Additionally, no herbicides, including those of which are approved for sensitive areas, can be applied within 10 feet of standing or flowing water.

A. Identification and Location of Wells and Surface Water Supplies

Maps created by MassDEP are referenced to identify public water supplies, aquifers, tributaries, and drainage basins for most of the State. Areas not covered are clearly identified in the field and mapped accordingly.

Local sources of specific information included the Conservation Commissions, Water Departments, and Boards of Health. Private wells on record in the MDAR's Private Well Registry will be delineated. The identification and delineation of private wells in the Commonwealth of Massachusetts is an ongoing process. In addition to the registry a yearly written inquiry to the Board of Health in each municipality, regarding the existence of any new and/or omitted private wells, is included in the Yearly Operational Plan mailing.

Prior to field delineations topographic maps were marked identifying the locations of public wells and surface water supplies. The specific locations were obtained from MassGIS overlay maps provided by the MassDEP and the Drinking Water Program.

B. Identification and Delineation of Wetlands

Wetland have been identified in the field in accordance with State regulations 310 CMR 10.02. These consist of: any bank, freshwater wetland, coastal wetland, beach, dune, flat, marsh, or swamp bordering on the ocean, any estuary, creek, river, stream, pond, or lake; land under any of those water bodies; and land subject to tidal action.

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 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

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

White	Non-sensitive areas
Blue	Sensitive area requiring a minimum of 12 months between applications
Double Blue	Sensitive area requiring a minimum of 24 months between applications
Yellow	No spray area

**C. Approval of Findings**

The Conservation Commission of each municipality is given the opportunity to observe and inspect the wetland boundary markers. A request for a determination of applicability was filed with each Conservation Commission pursuant to the Wetland Protection Act regulations, 310 CMR 10.05 (3)a.2. Form 1 was accompanied by a map of the ROW indicating the location of the boundary markers on the track and type of delineation that was made. These determinations are effective for the duration of the VMP as specified in 310 CMR 10.05 (3)(b)(1).

Data relating to the following is submitted to the Conservation Commission in each town as part of the YOP.

- a. Maps, or updates thereof, locating the ROW and sensitive areas not readily identifiable in the field.
- b. Herbicides proposed including application rates, carriers, adjuvants
- c. Herbicide application techniques and alternative management procedures proposed
- d. The company which will perform any herbicide treatment
- e. Identification of target vegetation
- f. Individual representing applicant supervising YOP
- g. Flagging methods to designate sensitive areas on the ROW
- h. Herbicide Fact Sheets as approved by MDAR
- i. Procedures and locations for handling, mixing, and loading of herbicide concentrates.

D. Operational Strategies and Procedures

Vegetation management procedures within the railroad ROW will be made consistent with all state and Federal regulations.

The general vegetation management strategies will exclude the use of herbicides in any application that would result in drift to the No Spray Areas as defined above.

All notification procedures required by State regulations will be followed. Several days prior to scheduled maintenance activities, a railroad track inspector or other person familiar with the boundary marking system, and equipped with boundary maps and/or log sheets, will review the area scheduled for treatment to ensure all boundary markers are visible and in the correct location.

All herbicide applicators working on the ROW will be accompanied by a railroad representative, equipped with the maps of the ROW and other required documents, and trained to observe the boundary markers and areas not readily identifiable in the field. The railroad representative may ride in a pilot vehicle or the spray vehicle in order to best suit operating conditions. When moving into or out of no-spray areas, the worker in control of the spray vehicle, will be signaled by the railroad representative or by a pilot vehicle, to cease or commence spraying.

**VII. OPERATIONAL GUIDELINES RELATIVE TO HERBICIDE USE****1. Site Review**

On sites believed to need vegetation control, a review of the vegetation conditions will be made. The review will be made by the track inspector or other person experienced in vegetation management. On the areas adjacent to the shoulder, the need for and type of management will be identified and the treatment required will be determined. A management strategy will be developed using this information.

2. Office Procedures

All available information will be analyzed in the following way. Areas scheduled for construction or other activity that will relate to or eliminate the need for vegetation maintenance, at that time, will be identified. If the vegetation on these areas will be controlled or eliminated, they will be removed from further consideration in the program now being developed. Next, the sensitive areas delineated will be reviewed to ensure that appropriate measures have been taken to protect these areas. The treatment methods prescribed in each sensitive area buffer zone will be reviewed and, whenever possible, a mechanical or more selective herbicide application prescribed. No-spray areas will be reviewed as to the overall vegetation conditions occurring, and mechanical methods will be used to selectively remove or side trim trees leaning into the roadbed area. New and developing vegetation control techniques will be reviewed to determine whether or not a suitable alternative to herbicide applications has been developed for use on the roadbed in sensitive areas. This analysis will provide the site-specific information required in the YOP. The YOP will be developed and submitted to MDAR for approval.

Preparation for Herbicide Application

At least 21 days prior to the scheduled application date, notification will be given to MDAR, Conservation Commission, Board of Health, Mayor, and local public water suppliers in each community as per Massachusetts State regulations. Prior to the scheduled application date, a qualified railroad employee will traverse the treatment area with the sensitive area maps and record to ensure that all boundary markers are visible and in the correct location.

1. Basic Requirements

To protect the public welfare and eliminate adverse impacts on the environment, railroad herbicide application crews must have an applicator who is licensed and certified in the Commonwealth of Massachusetts Category 40. Applicators must also have a Field Supervisor who reports daily to the railroad representative or other qualified railroad employee who is assigned to this task. The railroad is responsible for adherence to this VMP by railroad employees or their contractor. Applicators must follow all railroad safety regulations and all herbicide label directions.



a. Daily Field Report of Vegetation Control Activities

The daily field report of vegetation management activities will be filled out each day by operators doing the work. The daily field report will include, but not be limited to:

- Date and time of application
- Track or ROW designation
- Herbicides and associated materials used and quantities of each
- Weather, including wind speed and direction
- Weather constraints affecting application (Inclement weather halting operations)
- Calibration of equipment
- General narrative of the days application activities
- Name of the applicators and license numbers

2. Herbicide Application

The applicator will not handle, mix or load herbicide concentrate on a ROW within 100 feet of a sensitive area. Whenever possible, the applicator will handle, mix, or load herbicide while parked on a non-porous surface such as concrete or asphalt. Water for mixing of herbicide will be obtained from ponds or streams using MassDEP approved anti-siphon devices in accordance with 333 CMR 13.02-1 (a) and (b).

At the time of treatment, before the application begins, the herbicide applicator will review the sensitive areas, maps, and records with a qualified railroad employee. The railroad representative will alert the operator of the spray vehicle about the location of boundary markers or sensitive areas readily identifiable in the field so that the application can be regulated accordingly. In no-spray areas, as the applicator passes the boundary, he will visually verify that no herbicide is deposited in the area with the assistance of another employee.

VIII. ALTERNATIVE LAND USE

The railroad will review and evaluate new and innovative alternative land uses on the ROW. Safety considerations preclude most alternative land uses on the railroad ROW. The size, weight, and speed of trains and their cargoes being transported are hazardous to any activity inside the ROW boundary. Even agricultural activities might interfere with the operation of the railroad by reducing visibility to inspect trains and impeding drainage away from the ballast area.

Some uses of the ROW that are compatible with railroad uses are electric distribution and transmission lines, telephone lines, and cable TV lines. Other uses that may be used on wider railroad ROWs are sewer and water lines and major pipelines.

Parties interested may submit alternative land use proposals for the railroad's consideration.

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

This remedial plan is offered as a guide to proper procedures for addressing pesticide accidents. The railroads contract with independent, licensed, herbicide applicators that are solely responsible for the containment, clean up, and reporting of all accidents and/or spills. Since every incident is different, applicators must weigh factors specific to the situation and use their own judgment to decide the appropriate course of action. The railroad employee escorting the applicator will be responsible for immediately reporting all spills to their supervisor.

Federal and state statutes establish emergency response procedures that must be followed by the companies and their contractors in the event of a spill or related accident. Under the Federal Environmental Pesticide Control Act, it is the applicator's legal responsibility to clean up pesticide spills resulting from their use and handling of the product. Applicators are liable for damages, subject to penalties, and obligated to clean up and decontaminate areas resulting from pesticide spills.

Because applicators normally carry only small amounts of herbicides, the potential for serious accidents is relatively small. The applicator will be prepared to take remedial measures in the event of a spill regardless of size.

Applicators will carry the herbicide labels, Safety Data Sheets (SDS) for the chemicals being used, as well as equipment for emergency action including gloves, sand or other absorptive material, broom, shovel, and heavy-duty plastic bags or other leak-proof sealable containers.

A copy of the YOP shall be carried with the herbicide applicator. The YOP contains telephone numbers for the state police, local fire department, poison control center, herbicide manufacturer(s), and MassDEP, as well as a spill response checklist and SDS.

In the event of a spill or related accident, the following actions at a minimum shall be taken:

- Administer first aid if required (if necessary, call ambulance, Massachusetts poison information center);
- In case of contact with herbicides, decontaminate as directed by SDS, change clothing as appropriate, and seek medical attention if appropriate;
- Call police in event of damage to property, or fire / explosion;
- If possible and safe to do so, control the spill and confine the spread of liquids with dikes, sand, and/or absorbent materials;
- Clean up spilled material as necessary and label any containers of contaminated materials for proper disposal;
- If unable to clean up entire spill with materials available, contact local police and fire department;
- Notify MassDEP immediately if a wetland, water body, or other sensitive area is threatened or contaminated by release of hazardous materials. MassDEP will be contacted when there is a spill of a reportable quantity, regardless of major or minor spill status and in accordance with 310 CMR 40.000, Massachusetts Contingency Plan.



The Comprehensive Environmental Response, Compensation, and Liability Act 1980 (CERCLA) 42 U.S.C. §9601 et. seq., and the Federal Water Pollution Control Act (CWA) 33 U.S.C. §125 et. seq. are aimed at eliminating the accidental discharge of oil and hazardous substances into the environment, providing for the cleanup of such substances, and establishing responsibility for costs of cleanup. CERCLA and CWA are implemented by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 40 CFR §300 et. seq.

Massachusetts General Laws Chapter 21E, the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, Section 3 authorizes the MassDEP to act to secure the benefits of the CWA and CERCLA to the Commonwealth by promulgating and enforcing a Massachusetts Contingency Plan, 310 CMR 40.000, establishes standards and procedures for the discovery of discharges, notification of MassDEP, assessment of the problem, and implementation of appropriate remedial response actions, as set forth in 310 CMR 40.500.

Emergency Contacts

Massachusetts Pesticide Bureau	(617) 626-1720
MassDEP's Emergency Response	(888) 304-1133
ChemTrec	(800) 424-9300
MA Poison Control Center	(800) 222-1222
EPA Pesticide Hotline	(800) 858-7378

X. IDENTIFICATION AND QUALIFICATIONS OF INDIVIDUALS DEVELOPING AND EXECUTING THE PLAN

This Vegetation Management Plan was prepared by Mr. Timothy Dermody, E.I., Mr. Drew Bessette, P.E., and Mr. Matt Donovan E.I. of Fair Dermody Consulting Engineers, Inc., a civil engineering firm located in Portland, Maine.

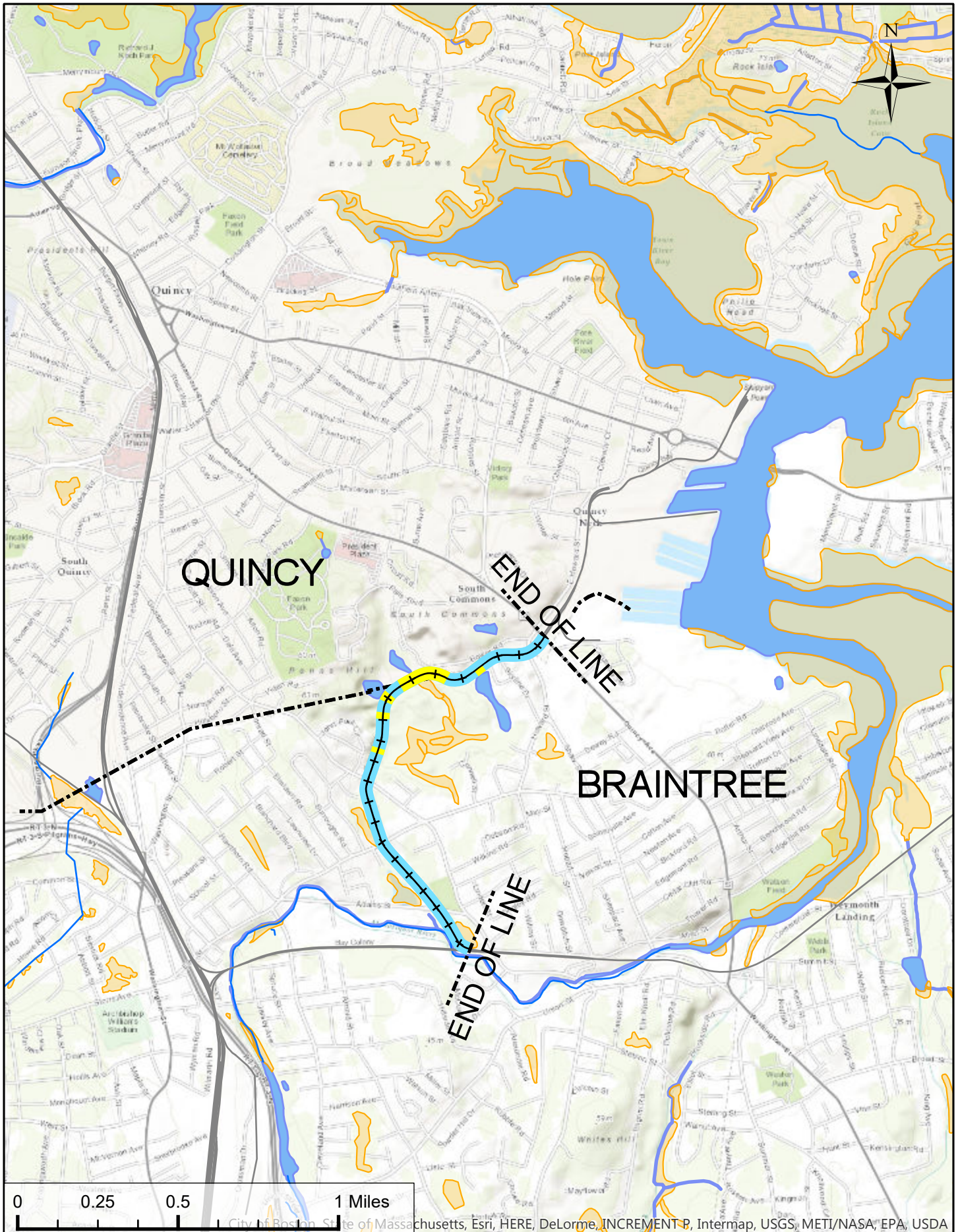
Mr. Dermody has a B.S. in civil engineering and has fourteen years of experience with the Massachusetts Rights-of-Way Management regulations. Mr. Bessette has a B.S. in civil engineering and is a licensed professional engineer in Massachusetts. He has four years of experience with the Massachusetts Rights-of-Way Management regulations. Mr. Donovan has a B.S. in civil engineering and has six years of experience with the Massachusetts Rights-of-Way Management regulations.

Mr. Bill Connell is currently responsible for the execution of this VMP. Mr. Connell is the Operations Manager for the Fore River Railroad Corporation.

APPENDIX “A”

Map of Fore River Railroad

FORE RIVER TRANSPORTATION



TOWN: BRAINTREE & QUINCY		LIMITED SPRAY ZONE (1 YEAR INTERVAL)		DEP APPROVED ZONE I		ZONE A		NATIONAL WETLANDS	
DATE: 7/15/2020		LIMITED SPRAY ZONE (2 YEAR INTERVAL)		DEP APPROVED ZONE II		ZONE B		CERTIFIED VERNAL POOL	
SCALE: 1:25,000		NO SPRAY ZONE		IWPA		NHESP PRIORITY HABITATS			
SHEET: 1 OF 1									

City of Boston, State of Massachusetts, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

APPENDIX “B”

333 CMR 11.00 RIGHTS-OF-WAY MANAGEMENT

333 CMR 11.00: RIGHTS OF WAY MANAGEMENT

Section

- 11.01: Purpose
- 11.02: Definitions
- 11.03: General Provisions
- 11.04: Sensitive Area Restrictions
- 11.05: Vegetation Management Plan (VMP)
- 11.06: Yearly Operational Plan (YOP)
- 11.07: Public Notification
- 11.08: Notice of Modification and Revocation
- 11.09: Right-of-appeal
- 11.10: Penalties
- 11.11: Rights-of-way Advisory Panel

11.01: Purpose

The purpose of 333 CMR 11.00 is to establish a statewide 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 the benefits to public safety provided by the selective use of herbicides. Specific goals of 333 CMR 11.00 are to:

- (1) Ensure that an Integrated Pest Management (IPM) approach to vegetation management is utilized on all rights-of-way covered by 333 CMR 11.00.
- (2) Establish standards, requirements and procedures necessary to prevent unreasonable risks to humans or the environment, taking into account the economic, social and environmental costs and benefits of the use of any pesticide.
- (3) Ensure ample opportunity for public and municipal agency input on potential impacts of herbicide application to rights-of-way in environmentally sensitive areas.
- (4) Establish a mechanism for public and municipal review of rights-of-way maintenance plans.

11.02: Definitions

For the purposes of 333 CMR 11.00, unless the context clearly requires otherwise, the following definitions shall apply:

Agricultural Area includes, but is not limited to, actively cultivated gardens, greenhouses, orchards, fields, pastures, and other areas under cultivation or agricultural management.

Applicant, any person representing any federal, state or local government or agency, utility, railroad or pipeline, that intends to maintain a right-of-way in the Commonwealth by application of herbicides.

Associated Surface Water Body, as identified on the most current available maps prepared by the Department of Environmental Protection, any body of water that is hydrologically connected to a Class A surface water source.

Ballast, the coarse gravel or crushed rock on which the ties, tracks and switching, signaling and communication devices of a railroad are laid.

Broadcast, any non-selective herbicide application technique which results in application to all vegetation within a target area.

Certified Vernal Pool, a confined basin depression, certified and mapped by NHESP pursuant to the provisions of 310 CMR 10.57(2)(a)5. and 6., which, at least in most years, holds water for a minimum of two continuous months during the spring and/or summer, and which is free of adult fish populations.

11.02: continued

Certified Vernal Pool Habitat, that vernal pool habitat which has been certified and mapped by NHESP pursuant to the provisions of 310 CMR 10.57(2)(a)5. and 6. or, in the event that such habitat has not been mapped, the area extending 100 feet horizontally outward from the boundary of any Certified Vernal Pool.

Class A Waters, waters which are designated as a source of public water supply, as defined in 314 CMR 4.05(3)(a).

Class B Drinking Water Intakes, intakes to Class B waters suitable as sources of public water supply with appropriate treatment, as defined at 314 CMR 4.05(3)(b) and as identified on the most current available maps prepared by the Department of Environmental Protection.

Department, the Department of Agricultural Resources.

FIFRA, the Federal Insecticide, Fungicide and Rodenticide Act, Public Law 92-516.

Foliar Treatment, any technique which applies herbicide to leaves of target vegetation.

Inhabited Area, any area where people generally live, work or gather, including, but not limited to, any residence, school, hospital, park or recreational facility.

Interim Wellhead Protection Area (IWPA), for public water systems using wells or well fields that lack a Department of Environmental Protection-approved Zone II, an interim wellhead protection area, as that term is defined in the Massachusetts drinking water regulations, 310 CMR 22.02, and as identified on the most current available maps prepared by the Department of Environmental Protection, shall apply. Generally, this is a ½- mile radius for sources whose approved pumping rate is 100,000 gallons per day or greater. For smaller sources, the radius in feet is determined by multiplying the approved pumping rate in gallons per minute by 32 and adding 400.

Limited Application Waiver, a waiver from the requirements of 333 CMR 11.05 and 11.06, granted at the Department's sole discretion pursuant to 333 CMR 11.03(14), when the reason for the application is emergency public health or safety or when the application is for one time only.

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.

Low Pressure, pressure under 60 pounds per square inch (psi).

Maps, United States Geological Survey maps of scale 1:25,000 or other maps, as determined by the Department, which are of such accuracy and scale to provide sufficient detail so that sensitive areas can be delineated.

NHESP, the Natural Heritage and Endangered Species Program within the Massachusetts Division of Fisheries and Wildlife.

11.02: continued

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) 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.

Person, an individual, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or its political subdivisions, administrative agencies, public or quasi-public corporation or body, or any other legal entity or its legal representatives, agent or assignee, or a group of persons.

Person Aggrieved, any person who, because of an act or failure to act by the Department may suffer an injury in fact which is different either in kind or magnitude from that suffered by the general public and which is within the scope of the interests identified in 333 CMR 11.00. Such person must specify in writing sufficient facts to allow the Department to determine whether or not the person is in fact aggrieved.

Private Well, any private drinking water supply identified by the local Board of Health, the well owner or the Department of Agricultural Resources.

Private Well Registry, a registry of private wells located within 100 feet of a right-of-way which is maintained by the Department of Agricultural Resources. Homeowners must notify the Department by completing a registration form which is available directly from the Department or online at the Department website.

Public Water Supplier, as defined at 310 CMR 22.02(1), any person who owns or operates a public water supply system.

Public Ground Water Source, a source of water for a Public Water Supply System, as that term is defined in the Massachusetts drinking water regulations at 310 CMR 22.02.

Right(s)-of-way (ROW), any roadway, or thoroughfare on which public passage is made and any corridor of land over which facilities such as railroads, powerlines, pipelines, conduits, channels or communication lines or bicycle paths are located.

Rights-of-way Advisory Panel, a panel established to advise the Department on issues relating to 333 CMR 11.00 and to fulfill specific functions as detailed within 333 CMR 11.05 and 11.11.

River, a river as defined at 310 CMR 10.04 and as identified on the most current available maps prepared by the Department of Environmental Protection.

Riverfront Area, a riverfront area as defined at 310 CMR 10.58(2) and as identified on the most current available maps prepared by the Department of Environmental Protection. In general, this term shall mean the area between the mean annual high-water line of a perennially flowing river and a parallel line 200 feet away.

Selective Application, any application of herbicides, in such a manner that the delivery to the target vegetation is optimized and delivery to non-target vegetation and the environment is minimized.

11.02: continued

Sensitive Areas, as defined in 333 CMR 11.04, 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.

State-listed Species, any species on the Massachusetts list of Endangered, Threatened, and Special Concern Species as described in the Massachusetts Endangered Species Act (M.G.L c. 131A; 321 CMR 10.02).

State-listed Species Habitat, the Estimated Habitats of Rare Wildlife (310 CMR 10.59 and 10.37) and the Priority Habitats for State-listed Species (321 CMR 10.02) as shown on the most recent edition of the Massachusetts Natural Heritage Atlas prepared by NHESP.

Stem Treatment, any technique including, but not limited to, stump, basal, stem, injection, banding, frill, or girdle and any other technique which delivers herbicide at low pressure to the stump, base or stem of the target vegetation.

Surface Water Source, any lake, pond, reservoir, river, stream or impoundment designated as a public water supply in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, as identified on the most current available maps prepared by the Department of Environmental Protection.

Target Vegetation, any plant species which has the potential to interfere with the operation and safety of the right-of-way.

Touch-up Application, any limited application of herbicides following an initial treatment, which is necessary to achieve the desired vegetation control.

Tributary, as identified on the most current available maps prepared by the Department of Environmental Protection, any body of running, or intermittently running, water which moves in a definite channel, naturally or artificially created, in the ground due to a hydraulic gradient, and which ultimately flows into a Class A surface water source, as defined in 314 CMR 4.05(3)(a).

Vegetation Management Plan (VMP), a long term management plan for the applicant's right-of-way system which describes the intended program for vegetation control over a five year period.

Vernal Pool, *see* Certified Vernal Pool.

Water Over Wetlands, the ocean or any estuary, lake or pond as defined at 310 CMR 10.04.

Wetlands, any of the following areas as defined in 310 CMR 10.02(1)(a), (b), (c) and (f):

- (a) Any bank, the ocean
- any freshwater wetland, any estuary
- any coastal wetland, any creek
- any beach, bordering any river
- any dune, on any stream
- any flat any pond
- any marsh, or any lake
- or any swamp;
- (b) Land under any of the water bodies listed in 333 CMR 11.02: Wetlands(a); and
- (c) Land subject to tidal action.

11.02: continued

Wetlands Determination, a written determination of the boundaries of Wetlands and boundaries of areas within 100 feet of Wetlands in accordance with the regulations of the Department of Environmental Protection (DEP) at 310 CMR 10.05(3)(a)1. and 2. 310 CMR 10.03(6)(b) requires applicants not eligible for a public utility exemption to submit these determinations with their VMPs if they will apply herbicides within 100 feet of wetlands and will not submit a Notice of Intent under M.G.L. c. 131, § 40, the Wetlands Protection Act. In order to obtain a Wetlands Determination, the applicant should submit a request to the conservation commission on maps of a scale that will enable the conservation commission or Department of Environmental Protection to find and delineate the boundaries of Wetlands and buffer zones within the vicinity of the right-of-way herbicide management area. To be considered “valid”, the Wetlands Determination should be made no sooner than six months immediately prior to the submission of the Vegetation Management Plan. The Wetlands Determination shall cover the period of the Vegetation Management Plan only and shall expire at the end of the five year period of that Vegetation Management Plan.

Yearly Operational Plan (YOP), the yearly operational plan which describes the detailed vegetation management operation for the calendar year consistent with the terms of the long term Vegetation Management Plan.

Zone A, as identified on the most current available maps prepared by the Department of Environmental Protection, the protective land area for a Surface Water Source, Class A water source, Tributary, or Associated Surface Water Body defined in 310 CMR 22.02 as:

- (a) the land area between the Class A surface water source and the upper boundary of the bank;
- (b) the land area within a 400 foot lateral distance from the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a); and
- (c) the land area within a 200 foot lateral distance from the upper boundary of the bank of a Tributary or Associated Surface Water Body.

Zone I, as identified on the most current available maps prepared by the Department of Environmental Protection and as defined at 310 CMR 22.02, the protective radius required around a public water supply well or wellfield. For public water system wells with approved yields of 100,000 gallons per day (gpd) or greater, the protective radius is 400 feet. Tubular wellfields require a 250 foot protective radius. Protective radii for all other public water system wells are determined by the following equation: Zone I radius in feet = $(150 \times \log \text{ of pumping rate in gpd}) - 350$.

Zone II, as identified on the most current available maps prepared by the Department of Environmental Protection and as defined at 310 CMR 22.02, the aquifer recharge area for a public water supply well or wellfield.

11.03: General Provisions

- (1) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way unless appropriately certified by the Department, or licensed by the Department and working under the on-site supervision of an appropriately certified applicator.
- (2) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way except in accordance with a Vegetation Management Plan (VMP) and a Yearly Operational Plan (YOP) as approved by the Department. The YOP shall be available at the work site at all times during herbicide applications and be made available to the Department and municipal officials including the Conservation Commission and Board of Health upon reasonable request.
- (3) No person shall handle, mix or load an herbicide concentrate on a right-of-way within 100 feet of a sensitive area.
- (4) The perimeter of any sensitive areas which are not readily identifiable on the ROW shall be identified with a clearly visible marker system, consistent with the VMP, prior to any herbicide application.

11.03: continued

- (5) No foliar application of herbicides shall be used to control vegetation greater than 12 feet in height except for side trimming.
- (6) No herbicide shall be applied when the wind velocity is such that there is a high propensity to drift off target and/or during measurable precipitation, and no person shall apply herbicides in such a manner that results in drift into any No-spray Area.
- (7) No person shall apply herbicides by aircraft for the purpose of clearing or maintaining a right-of-way.
- (8) No touch-up applications shall be carried out except under the following conditions:
 - (a) Touch-up applications must occur within 12 months of the initial application.
 - (b) All applicable public notification procedures of M.G.L. c. 132B, § 6B, as outlined in 333 CMR 11.07(1) and (3), are followed.
 - (c) No more than 10% of the initially identified target vegetation on the applicant's right-of-way in any municipality may be treated and the total amount of herbicide applied in any one year shall not exceed the limits specified by the label or Yearly Operational Plan.
 - (d) The Department may impose such additional restrictions or conditions on the use of herbicides as it deems necessary to protect public health and the environment.
- (9) The Department will maintain mailing lists of individuals and groups desiring to obtain notices on various aspects of the Program.
- (10) No person shall apply any herbicide identified as a Potential Ground Water Contaminant pursuant to 333 CMR 12.00 to a right-of-way.
- (11) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way unless that person has obtained the most current available map of public ground water sources from the Department of Environmental Protection.
- (12) No person shall use an herbicide for the purpose of clearing or maintaining a right-of-way unless that person has done one or more of the following:
 - (a) obtained a current list of identified Private Wells within 100 feet of the right-of-way from the Board of Health, or
 - (b) obtained a current list of all private wells, within 100 feet of the right of way from the Department of Agricultural Resources private well registry; or
 - (c) followed an alternative Private Well identification method outlined in an approved YOP.
- (13) The applicator shall provide any employee of any state agency, or authority as defined in M.G.L. c. 3, § 39, when such employee is, within a right-of-way, using pesticides, supervising the use of pesticides, or present during the use of pesticides, with personal protective equipment and clothing. Applicators should note that other federal or state laws or regulations pertaining to pesticide applications may require this personal protective equipment to include protections according to Material Safety Data Sheets (MSDS's), the product label, and any other supporting technical data supplied by the manufacturer.
- (14) Notwithstanding the provisions of 333 CMR 11.03(2) or other provisions of 333 CMR 11.00, the Department may, at its sole discretion, issue Limited Application Waivers to applicants wishing to apply herbicides to clear or maintain rights-of-way without VMPs or YOPs, but only under the following conditions:
 - (a) The applicant must demonstrate either:
 1. that the application will not occur more than once in a five-year period unless a VMP and a YOP are prepared and all other requirements of 333 CMR 11.00 are met; or
 2. that the application is necessary to protect public health or safety.
 - (b) The applicant must still adhere to all public notification requirements established at 333 CMR 11.07(1) and (3).
 - (c) The applicant must provide the Department with a letter establishing the concurrence of the chief elected official or board of selectmen of the municipality where the application is to be made.

11.03: continued

(d) The applicant may only use herbicides on the Department's "Herbicides Recommended for Use in Sensitive Areas List."

(e) If the application could impact Wetlands, the Department recommends that the applicant send a copy of its application for a Limited Application Waiver to the Department of Environmental Protection's Division of Wetlands and Waterways no less than 21 days before the proposed application.

(f) It should be noted that, with certain exceptions for public utilities, wetlands regulations at 310 CMR 10.03(6)(b) currently require Wetlands Determinations prior to any application within 100 feet of a Wetland.

Limited Application Waivers shall be issued solely at the Department's discretion, and the Department may impose such additional restrictions or conditions on the use of herbicides as it deems necessary to protect public health and the environment.

11.04: Sensitive Area Restrictions(1) General. In any sensitive area:

(a) No more than the minimum labeled rate of herbicide for the appropriate site, pest, and application method shall be applied.

(b) Herbicides shall only be applied selectively by low pressure, using foliar techniques or basal or cut-stump applications, or other method approved for use by the Department.

(c) No person shall apply herbicides for the purpose of clearing or maintaining a right-of-way in such a manner that results in drift to any area within ten feet of standing or flowing water in a wetland; or area within 400 feet of a public drinking water supply well; or area within 100 feet of any Class A surface water used as a public water supply; or area within 50 feet of a Private Well.

(d) Only herbicides specified by the Department as acceptable for use in sensitive areas pursuant to the Cooperative Agreement executed between the Department of Agricultural Resources and the Department of Environmental Protection on July 1 and 2, 1987, or future amendments thereto, shall be used in sensitive areas. Applicants proposing to use an herbicide which has been registered for use on rights-of-way but has not yet been evaluated pursuant to the provisions of the Cooperative Agreement may request that such herbicides be evaluated pursuant to said provisions. For an herbicide that has been evaluated pursuant to the provisions of the Cooperative Agreement, applicants proposing to use such herbicide in a manner inconsistent with the terms and conditions of use imposed in the guidelines may request a modification or waiver of such terms or conditions. A request for such modification or waiver shall provide a detailed rationale for use, with all relevant data including but not limited to environmental fate, efficacy and human health effects of the proposed herbicide. Such herbicides and/or uses shall be subject to the evaluation standards adopted by the Departments of Agricultural Resources and Environmental Protection in the Cooperative Agreement.

Commentary. Applicants not eligible for the public utilities exemption from the Wetlands Protection Act outlined at 310 CMR 10.03(6)(a), who wish to apply pesticides registered for use in Massachusetts to rights-of-way, may choose to apply herbicides determined to be suitable for use in sensitive areas in accordance with the provisions of the Cooperative Agreement mentioned above or, alternatively, such applicants may proceed pursuant to the provisions of 310 CMR 10.00 as authorized by M.G.L. c. 131, § 40.

(e) The Department may impose such additional restrictions or conditions on the use of herbicides within or adjacent to sensitive areas as it determines necessary to protect human health or the environment. Such changes may be proposed by a municipal agency or individual during the public comment period.

(f) In the event of a question or dispute as to which setback applies to a sensitive area, the most restrictive setback shall apply.

(2) Water Supplies.(a) Public Ground Water Sources.

1. No herbicides shall be applied within a Zone I.

2. No herbicides shall be applied within a Zone II or IWPA unless:

11.04: continued

- a. A minimum of 24 months has elapsed since the last application to the site; and
 - b. Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.
- (b) Class A Public Surface Water Sources, Associated Surface Water Bodies, Tributaries and Class B Drinking Water Intakes.
 - 1. No herbicides shall be applied within 100 feet of any Class A public surface water source.
 - 2. No herbicides shall be applied within 100 feet of any tributary or associated surface water body located within the Zone A of a Class A public surface water source, or within ten feet of any tributary or associated surface water body located outside of the Zone A of the Class A public surface water source.
 - 3. No herbicides shall be applied within a lateral distance of 100 feet for 400 feet upstream of any Class B Drinking Water Intake.
 - 4. No herbicides shall be applied within a distance of between 100 feet from any Class A surface water source and the outer boundary of any Zone A, or within a distance of between ten feet and the outer boundary of the Zone A for any tributary or associated surface water body located outside of the Zone A of a Class A surface water source, or within a lateral distance of between 100 and 200 feet for 400 feet upstream of a Class B Drinking Water Intake, unless:
 - a. A minimum of 24 months has elapsed since the last application to the site; and
 - b. Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.
- (c) Private Wells.
 - 1. No herbicides shall be applied within 50 feet of an identified Private Well.
 - 2. No herbicides shall be applied within a distance of between 50 feet and 100 feet of an identified Private Well, unless:
 - a. A minimum of 24 months has elapsed since the last application to the site; and
 - b. Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.
- (3) State-listed Species Habitat.
 - (a) Any person proposing to apply an herbicide within any State-listed Species Habitat who does not have a current Yearly Operational Plan approved in writing by the Division of Fisheries and Wildlife pursuant to 321 CMR 10.14(12), shall submit all necessary materials required for review pursuant to 321 CMR 10.18.
 - (b) The management of vegetation within existing utility rights-of-way shall be exempt from the requirements of 321 CMR 10.18 through 10.23, provided that the management is carried out in accordance with a Yearly Operational Plan approved in writing by the Division of Fisheries and Wildlife, pursuant to 321 CMR 10.14(12).
 - (c) No person shall apply an herbicide within State-listed Species Habitat unless the application is approved by the Division of Fisheries and Wildlife pursuant to 333 CMR 11.04(3)(a) and (3)(b), and such approval is submitted to the Department.
- (4) Wetlands, Waters Over Wetlands, Riverfront Areas, and Certified Vernal Pools.
 - (a) No herbicide shall be applied on or within ten feet of a Wetland or Water Over a Wetland, within ten feet of the mean annual high-water line of any River, or within ten feet of any Certified Vernal Pool.
 - (b) No herbicide shall be applied on or within a distance of between ten feet and 100 feet of any Wetland or Water Over a Wetland, within a distance of ten feet from the mean annual high-water line of any River and the outer boundary of any Riverfront Area, or within a distance of ten feet from any Certified Vernal Pool and the outer boundary of any Certified Vernal Pool Habitat unless:
 - 1. A minimum of 12 months has elapsed since the last application to the site; and
 - 2. Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.
 - (c) Notwithstanding 333 CMR 11.04(4)(a) and (b), public utilities providing electric, gas, water, telephone, telegraph and other telecommunication services (and other applicants, if consistent with all relevant provisions of the Massachusetts Wetlands Protection Act and its regulations in effect at the time of application) may apply herbicides on or within ten feet of a Wetland in accordance with the following conditions:

11.04: continued

1. Submission of a study, the design of which is subject to prior approval by the Departments of Agricultural Resources and Environmental Protection, evaluating impacts of the proposed vegetation management program utilizing herbicides on or within ten feet of Wetlands, and comparing those impacts to those which would result if only non-chemical control methods were used in these areas. The study must detail vegetation management practices and use patterns specific to those used by the type of entity submitting the study; and
 2. A finding by the Department, after consultation with the Rights-of-way Advisory Panel, that the proposed vegetation management program utilizing herbicides on or within ten feet of Wetlands will result in less impacts to the Wetlands than mechanical control.
 3. Notwithstanding the above, no herbicides shall be applied on or within ten feet of any standing or flowing water in a Wetland.
- (5) Inhabited and Agricultural Areas. No foliar herbicide shall be applied within 100 feet of any Inhabited Area or any Agricultural Area unless:
- (a) A minimum of 12 months has elapsed since the last application to the site; and
 - (b) Herbicides are applied selectively by low pressure, using foliar techniques or basal or cut-stump applications.

11.05: Vegetation Management Plan (VMP)

- (1) General.
 - (a) Unless otherwise specified by the Department, all VMPs should be submitted by the applicant no later than September 1st prior to the calendar year of the proposed first year of maintenance. All approved VMPs shall be effective for a five year period unless otherwise modified, or revoked by the Department.
 - (b) The VMP shall be presented on forms and/or format approved by the Department.
- (2) Requirements. The VMP shall include, but not be limited to, the following:
 - (a) General statement of goals and objectives of the VMP.
 - (b) Identification of target vegetation.
 - (c) Intended methods of vegetation management and rationale for use, including vegetation control techniques, equipment proposed for use, timing of applications and alternative control procedures.
 - (d) Discussion of justification for proposed herbicide applications, including a description of the alternative control methods considered and the reasons that they were rejected.
 - (e) Methods, references and sources for identifying sensitive areas and control strategies proposed for sensitive areas. Applicants should note that the Department of Environmental Protection regulations at 310 CMR 10.03(6)(b) require Wetlands Determinations for applicants that are not eligible for a public utility exemption.
 - (f) Operational guidelines for applicators relative to herbicide use.
 - (g) Identification and qualifications of individuals developing and submitting a plan.
 - (h) A detailed description of the IPM Program, showing how it will minimize the amount and frequency of herbicide application.
 - (i) Description of alternative land use provisions or agreements that may be established with individuals, state, federal or municipal agencies that would minimize the need for herbicides, including the rationale for accepting or denying any reasonable request made by any individual.
 - (j) Description of a remedial plan to address spills and related accidents.
 - (k) For state agencies and authorities as defined in M.G.L. c. 3, § 39, a description of the applicant's policy to eliminate or, if necessary, reduce the use of pesticides for any vegetation management purpose along roadways, and a demonstration that, for the proposed application, the costs of non-chemical vegetation control significantly outweigh the benefits.
- (3) Public Notice, Review and Comment.
 - (a) Upon receipt of the proposed VMP, the Department shall schedule and hold appropriate regional public hearings affording all interested parties the opportunity to comment, both at the hearings and in writing to the Department, on the proposed plan.

11.05: continued

(b) At least 21 days prior to the public hearings, the Department shall publish notice of the hearings in the *Environmental Monitor* and regionally located newspapers, and send notice to municipalities covered by the plan and to the appropriate mailing list. The notice will include locations where copies of the VMP can be reviewed.

(c) The public shall have no less than 45 days, starting from publication of the *Environmental Monitor* notice, to comment upon proposed VMPs, unless the Department extends the comment period for good cause.

(d) Wherever a chief elected official, Board of Health or Conservation Commission in a municipality covered by the proposed VMP requests a copy of the proposed plan, the applicant shall, at least 21 days prior to the end of the public comment period, respond to this request. The response must either include a copy of the proposed VMP, or an Internet address where the VMP may be viewed and a note that a hard copy will be provided promptly upon further request.

(4) Disposition of VMP.

(a) 25 copies of the proposed VMP shall be submitted to the Department. The Department shall distribute copies of the proposed VMP to each member of the Rights-of-way Advisory Panel. The Department may, at its sole discretion, allow electronic presentation of the VMP in lieu of some or all of the 25 copies that would otherwise be submitted pursuant to 333 CMR 11.05(4).

(b) Within 30 days of the end of the public comment period unless extended for good cause, the Rights-of-way Advisory Panel shall review the VMPs and recommend in writing to the Department approval, denial or modification of each VMP; if necessary, the Advisory Panel may request additional information from the applicant.

(c) Within 21 days of the end of the Rights-of-way Advisory Panel review period, unless extended by the Department for good cause, the Department will notify the applicant and the Advisory Panel in writing one of the following:

1. request for additional information or modification;
2. denial of VMP; or
3. approval of VMP.

(d) The VMP may be modified, withdrawn or amended by the applicant through a written request sent by certified mail to the Department.

(e) Resubmission of a denied VMP, updating of a VMP, or a significant amendment to an approved VMP shall be processed according to 333 CMR 11.05.

(f) The applicant must send a copy of the approved VMP, or an Internet address where the VMP may be viewed and a note that a hard copy will be provided promptly upon further request, to the chief elected official, Board of Health, and Conservation Commission in each municipality covered by the plan.

(5) Time for Action. Non-action by the Department on a VMP within the time specified in 333 CMR 11.05 does not constitute approval of the submitted plan. In the event that the Department fails to notify the applicant of a decision within the time specified in 333 CMR 11.05(4) and upon written request from the applicant, the Commissioner must issue a finding within ten days of receipt stating the reason for the delay and providing an estimated completion date.

11.06: Yearly Operational Plan (YOP)

(1) General.

(a) The applicant is responsible for the accuracy and completeness of all information submitted with the YOP. The YOP shall be consistent with the objectives of the VMP and shall describe the intended operational program for that calendar year.

(b) The YOP shall be presented on forms and in a format approved by the Department.

(2) Requirements. The YOP shall include but not be limited to the following:

- (a) Maps locating the rights-of-way and sensitive areas not readily identifiable in the field;
- (b) Herbicides proposed including Environmental Protection Agency (EPA) Registration numbers, application rates, carriers and adjuvants;
- (c) Herbicide application techniques and alternative control procedures proposed.
- (d) The name, address and phone number of the company which will perform any herbicide treatment;

11.06: continued

- (e) Identification of target vegetation;
- (f) The name, address and phone number of the individual representing the YOP applicant;
- (g) Description of methods used to flag or otherwise designate sensitive areas on the right-of-way;
- (h) Herbicide Fact Sheets as approved by the Department; and
- (i) Procedures and locations for handling, mixing and loading of herbicide concentrates.

(3) Public Notice, Review and Comment.

- (a) Upon submittal of the YOP for approval, the Department will publish a notice in the *Environmental Monitor*. Said notice shall be provided by the applicant and shall include the information on the municipalities through which the rights-of-way pass, a brief description of the intended program, and the procedure for public review and comment. The Department shall send notification of the publication to the applicant and the appropriate mailing list.
- (b) Upon submittal of the YOP to the Department, the applicant shall provide by certified mail under separate cover to the Board of Health, Conservation Commission, chief elected municipal official, and where applicable, the Massachusetts Water Resources Authority and Massachusetts Department of Conservation and Recreation, a copy of the proposed YOP (or an Internet address where the proposed YOP may be viewed and a note that a hard copy will be provided promptly upon request) and the *Environmental Monitor* notice for the municipality or municipalities in which the herbicide treatment is proposed. Community water suppliers shall receive electronic information or a one page notification by mail which provides details about where to receive more information. The applicant shall maintain copies of the packet sent to municipalities and certified mail receipts. The applicant shall make copies of the packet, certified mail receipts, and any further correspondence regarding hard copies of YOPs in lieu of Internet viewing, available to the Department upon request.
- (c) The Department shall allow a 45-day comment period on proposed YOPs, unless extended for good cause, commencing with the publication of the notice in the *Environmental Monitor* and receipt of the proposed YOP and *Environmental Monitor* notice by each municipality.
- (d) The Department may approve, deny or modify YOPs after the 45-day comment period has expired.

(4) Disposition of YOP.

- (a) The applicant shall submit the YOP to the Department at least 90 days prior to the proposed commencement of application to allow completion of the comment and review period.
- (b) The Department shall review the YOP to ensure that the YOP is consistent with the approved VMP. Any inconsistencies or deficiencies will be noted by the Department and returned with the YOP to the applicant.
- (c) Where practical, the Department shall approve or deny the YOP within 90 days of receipt. The Department will provide notice of the decision to the applicant, municipal agencies and commentators in writing.
- (d) The approved YOP in conjunction with the VMP shall govern the application of herbicide for a period not to exceed 12 months in accordance with other laws and regulations of the State and Federal governments and impose such conditions as necessary to minimize the risk of adverse effects on human health and the environment.

(5) Time for Action. Non-action by the Department on a YOP within the time specified in 333 CMR 11.06(4) does not constitute approval of the submitted plan. In the event that the Department fails to notify the applicant of a decision within the time specified and upon a written request from the applicant, the Commissioner must issue a finding within ten days of receipt stating the reason for the delay and providing an estimated completion date.

11.07: Public Notification

(1) At least 21 days in advance of application of herbicide to a right-of-way in any city or town, the applicant shall notify the Department, the board of health, and the local public water supplier and, by registered mail, the Mayor, City Manager or Chairman of the Board of Selectman, and the conservation commission in the municipality where the right-of-way lies. The notice shall include the following information: the approximate dates on which such herbicide application shall commence and conclude, provided however, that said application shall not commence more than ten days before nor conclude more than ten days after said approximate dates; the method and locations of application; a Department-approved Herbicide Fact Sheet on the active ingredient(s) of the herbicide(s) used; the EPA registration number(s) for the herbicide(s) used; the name, title, business address and phone number of the certified commercial applicator or licensed applicator, or the contractor, employer or employees responsible for carrying out the application. Where specific information required for this notice is already contained in the current YOP that is on file with the local official, the applicant may incorporate the appropriate pages of the YOP by reference in its notice to that official, indicating that these pages are also directly available from the applicant upon request.

(2) This public notice may run concurrently with the public notice and comment period in 333 CMR 11.06(3), provided that the notice is distributed at least 21 days prior to the herbicide application, and that, prior to the herbicide application, the public notice and comment period has closed and the Department has granted YOP approval without modifications. When the Department's final approval requires modifications or application dates are selected after YOP approval, separate notice under 333 CMR 11.07(1) is required.

(3) At least 48 hours prior to the application referred to in 333 CMR 11.07(1), the applicant must publish a conspicuous notice in at least one newspaper of general circulation in the city or town where the right-of-way lies. The notice must appear in the local section of the newspaper and measure at least four by five inches in size. The notice shall contain the following information: the method and locations of pesticide application; the approximate dates on which the pesticide application shall commence and conclude, provided that the applications shall not commence more than ten days before nor conclude ten days after said approximate dates; a list of potential pesticides to be used; a description of the purpose of the application; and the name, title, business address and phone number of a designated contact person representing the applicant from whom any citizen may request further information. The notice should apply only to the calendar year in which the notice is published. Upon request the notice must be made available to the Department.

11.08: Notice of Modification and Revocation

(1) The Department may suspend approval of any VMP or YOP, by written notice to the applicant and applicator, halting the application of herbicide to that right-of-way of the YOP. After 21 days if the applicant does not request a hearing, the Department may revoke or modify the VMP and YOP, if it finds:

- (a) that the terms, conditions of restrictions thereof, are being violated or are inadequate to avoid unreasonable adverse effects on the environment or on human health; or
- (b) that the applicant has made a false or misleading statement or has not provided information requested by the Department or Rights-of-way Advisory Panel; or
- (c) that the applicant has violated any provision of the Massachusetts Pesticide Control Act or FIFRA, or any regulations, standards, orders or license issued under either.

(2) Upon notice of revocation or modification, the applicant may modify the YOP by written request to the Department. Applications to modify the YOP shall be submitted in the manner set forth in 333 CMR 11.06 and disposed of in the manner set forth in 333 CMR 11.06. The Department may waive all or part of the requirement if it determines that the proposed changes do not significantly change the terms of the approved YOP.

333 CMR: PESTICIDE BOARD

11.09: Right-of-appeal

Any person aggrieved by the decision of the Department to approve, deny, modify or revoke a VMP or YOP may request an adjudicatory hearing. The request for a hearing must be received by the Department within 21 calendar days after receipt of the decision. The request should state clearly and concisely the facts of the proceeding, the reasons the decision is alleged to be inconsistent with 333 CMR 11.00 and the relief sought by the adjudicatory hearing. The adjudicatory hearing before the Pesticide Board shall be conducted in accordance with the informal rules of adjudicatory proceeding as set forth in M.G.L. c. 30A.

11.10: Penalties

Any person who violates any provision of 333 CMR 11.00 shall be subject to the criminal and civil penalties set forth in M.G.L. c. 132B, § 14.

11.11: Rights-of-way Advisory Panel

(1) A Rights-of-way Advisory Panel shall be established to advise the Department on issues relating to 333 CMR 11.00 and to fulfill specific functions as detailed within 333 CMR 11.00.

(2) The Department shall request that the following members participate on the Rights-of-way Advisory Panel: the Commissioners/Secretaries or his/her designee of the Department of Environmental Protection, the Department of Public Health, and the Executive Office of Transportation; and a representative, respectively, from each of the following, all to be appointed by the Department Commissioner: the Massachusetts Association of Conservation Commissions, the Massachusetts Association of Health Boards, the Massachusetts Department of Conservation and Recreation, and an Environmental Advocacy Organization Representative, a member of the University of Massachusetts Extension who is well versed in weed science and Integrated Pest Management of weeds, a representative of the Massachusetts Railroad Association, a representative of a utility company and a commercial pesticide applicator.

(3) Non-agency representatives shall remain on the panel for a term of five years. Any member absent from two or more consecutive meetings may be removed from the Advisory Panel at the discretion of the Commissioner of the Department, and a replacement requested from the representative agency, industry group, or association.

(4) The Advisory Panel shall meet at least once each year, and shall hold further meetings upon the request of the Department of Agricultural Resources or at the request of any two members of the Advisory Panel.

(5) All Advisory Panel members shall serve without compensation.

REGULATORY AUTHORITY

333 CMR 11.00: M.G.L. c. 132B.

APPENDIX “C”

310 CMR 10.00

**PREFACE TO WETLANDS REGULATIONS
RELATIVE TO RIGHTS-OF-WAY MANAGEMENT**

PREFACE TO WETLANDS REGULATIONS RELATIVE
TO RIGHTS OF WAY MANAGEMENT

1987 REGULATORY REVISION

In 1983, the Massachusetts Pesticide Control Act, M.G.L. c. 132B, was amended to require notification of conservation commissions prior to application of herbicides on rights of way. Many commissions became aware for the first time that application of herbicides on rights of way may result in alteration of wetlands and, with the exception of exempt utilities, may require action under the M.G.L. c. 131, § 40. On July 18, 1986, the Department issued a final decision after adjudicatory hearing in DEP Hearing Docket Nos. 83-28 and 83-35 (Clinton and Leverett) finding that the application of specific herbicides by the railroads to track and ballast within 100 feet of wetland areas would alter those wetlands and was therefore subject to jurisdiction under M.G.L. c. 131, § 40, requiring the filing of Notices of Intent with the local conservation commissions.

The Department of Food and Agriculture (DFA) initiated a Generic Environmental Impact Report (GEIR) evaluating alternatives for rights of way management. A technical advisory task force of environmentalists, agencies and rights of way managers assisted in the GEIR preparation and, based on results of the study, recommended to the Secretary of Environmental Affairs a framework for a coherent state-wide rights of way regulatory program. DFA published draft regulations to implement this program in 1986 and received extensive public commentary. Final regulations, 333 CMR 11.00, became effective on July 10, 1987.

The DFA regulations require persons proposing to apply herbicides to rights of way to first receive approval of a five year Vegetation Management Plan (VMP) and Yearly Operating Plan (YOP). These regulations identify certain "sensitive areas", including wetlands and public and private surface and groundwater supplies, where the application of herbicides is, in most instances, prohibited, and areas adjacent to the sensitive areas where use of herbicides is curtailed.

DEP worked closely with DFA to include provisions which give maximum protection for water supplies and provide protection for wetlands at least equal to that provided under the M.G.L. c. 131, § 40 and 310 CMR 10.00. To eliminate duplicate review under M.G.L. c. 131, § 40, DEP has adopted changes to the wetlands regulations which allow herbicide applications on rights of way in accordance with the DFA regulations without filing a Notice of Intent under the M.G.L. c. 131, § 40. However, non-exempt applicants will still be required to file a Request for Determination of Applicability to the appropriate conservation commission to establish boundaries of wetlands on or near the right of way. Specifically, these regulations presume that work performed in accordance with a VMP and YOP, as may be required under DFA regulations, will not alter an area subject to protection under M.G.L. c. 131, § 40.

During the public comment period on its proposed regulations, the Department identified several issues of major concern. After consideration of all comments, the Department has determined that, except for minor points of clarification and the addition of an automatic expiration date, no further changes in the regulations are warranted at this time. A discussion of these issues follows.

A. Presumption vs. Limited Project. Several commentators suggested that conservation commissions should retain the authority to review each herbicide application on rights of way through the usual Notice of Intent process. These regulations create a presumption that herbicide application carried out in accordance with an approved VMP and YOP under the DFA regulations will not alter wetlands and that the filing of a Notice of Intent is therefore not required. This procedure was established pursuant to the recommendation of the GEIR task force which states:

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

10.00: continued

The regulations which provide for approval of Vegetation Management Plans by the Department of Food and Agriculture should be conditioned on review and approval by the Department of Environmental Protection (DEP) of those portions of the Plans that deal with wetlands. The DEP should be required to certify to the DFA that these portions of the Plans will result in compliance with the substantive and procedural provisions which protect the interests of the M.G.L. c. 131, § 40. If the regulations are so drawn, activities under a Plan approved by DEP would not constitute an alteration of wetlands as defined under 310 CMR 10.00.

Since the DFA regulations provide that DEP is a member of the VMP advisory panel which reviews and makes recommendations on the approval of VMPs, the GEIR task force recommendations have been fully implemented. Therefore, the Department has determined that it would be duplicative to require the filing of individual Notices of Intent in each municipality for each application of herbicides to rights of way.

B. Adequacy of Setback from Wetlands. The DFA rights of way regulations prohibit application of herbicides on or within ten feet of wetlands and strictly limit herbicide application from ten feet to 100 feet of wetlands. Many commentators questioned the adequacy of these setback requirements and suggested that a 50 or 100 foot no spray zone would be more appropriate. Several commentators suggested that the proposed setback requirements were inconsistent with the Department's adjudicatory hearing decision in the Clinton and Leverett cases.

The no spray zone surrounding wetlands is necessary for three reasons: to compensate for mapping errors, to compensate for applicator errors and to assure that herbicides will not migrate into wetlands after application on the adjacent uplands. During the public comment period, the Department received no evidence demonstrating that the ten-foot setback established in the DFA regulations will not be adequate. The DFA regulations establish a procedure for selecting a limited number of herbicides that may be applied in the limited spray zone (from 10 to 100 feet from wetlands) which is adjacent to the no spray zone. Herbicides that will be selected for use in these limited spray zones under the DFA regulations are those which available data demonstrate will not migrate further than ten feet.

The applicators have argued that they can maintain a level of accuracy in mapping of wetlands and in application of herbicides to assure that herbicides will not be inadvertently applied within ten feet of wetland areas. The Department is not convinced that these claims are unreasonable; however, in order to confirm their accuracy, the Department has included in the final regulations an automatic expiration date two years from the effective date, which is coterminous with the expiration date of the DFA regulations. During the two-year effective period of these regulations, the Department expects applicators to conduct studies monitoring herbicide application operations and to submit a report concerning impacts of herbicide application on wetlands under these new regulations detailing the accuracy of wetlands mapping, the accuracy of herbicide application, and the extent of herbicide migration. The results of this study will provide a basis for recommendations by the Department for amendments to the DFA regulations and a decision on reauthorization of these amendments to the Department's wetland regulations.

Finally, the Department does not find the setbacks requirements established in the DFA regulations to be inconsistent with its decision in the Clinton and Leverett cases. In that decision, the Department assumed a worst-case analysis in terms of an herbicide known to be highly mobile which was applied to the track and ballast areas adjacent to wetlands. The Department found, based on the particular facts of these cases and the particular herbicide proposed for application that there would be a migration of that herbicide into the wetlands from application within the 100-foot buffer zone that would be sufficiently concentrated to cause alterations of the wetlands plants. However, the DFA rights of way management regulations set up a procedure for identification of herbicides which are relatively immobile and which are preapproved for application on the buffer zone in order to avoid alteration of wetlands plants. Furthermore, guidelines for application of the selected herbicides will also be established. Finally, no herbicides may be applied within ten feet of

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

10.00: continued

wetland areas. In light of the strict controls placed on application of herbicides within the 100-foot buffer zone under the DFA regulations, the Department finds that adoptions of the proposed regulatory scheme is fully consistent with its previous adjudicatory hearing decision in the Clinton and Leverett cases.

C. Impacts of Herbicides Application on Wildlife Habitat. The Department is currently developing regulations under M.G.L. c. 131, § 40 to protect wildlife habitat. The effective date of these regulations is November 1, 1987. One commentator expressed concern regarding the impact of herbicide application on wildlife habitat in wetlands, and particularly on the habitat of rare, "state-listed" wildlife species. As discussed above, the Department has determined that the DFA regulations provide for protection of wetlands from alterations due to herbicide application. However, the OFA regulations do not include floodplains in their definition of wetlands, although those regulations do prohibit herbicide application within 10 feet of any standing or flowing surface water. Beyond that, there is no specific protection of wildlife habitat, including rare species, in floodplain areas.

The Department is concerned that the DFA regulations do not specifically address protection of wildlife habitat in floodplains, in particular those rare, "state-listed" wildlife species. Therefore, as a member of the VMP advisory panel, the Department will review VMPs for potential effect on wildlife habitat and specifically will recommend disapproval of any VMP that will have an adverse effect in areas mapped by the Natural Heritage and Endangered Species Program as habitat of any rare, "state-listed" wildlife species. Furthermore, the Department expects applicators to incorporate into the previously discussed two-year monitoring study a section detailing the effects of herbicide application on wildlife habitat in floodplains and on the habitat of rare, "state-listed" wildlife species. The Department will use the results of this study as the basis for recommending any amendments to the DFA regulations and a decision on reauthorization of these amendments to the Department's wetlands regulations.

APPENDIX “D”

Massachusetts Rights of Way Sensitive Area Materials List

Massachusetts Rights of Way Sensitive Area Materials List

List of herbicide active ingredients and product approved for use
within sensitive areas of rights-of-way in Massachusetts

June 2020

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

Active Ingredient Factsheets:

[Glyphosate](#)

[Imazapyr](#)

[Metsulfuron Methyl](#)

[Sulfometuron Methyl](#)

[Fosamine Ammonium Factsheet](#)

[Triclopyr Factsheet](#)

[Paclobutrazol Factsheet](#)

Products

Active Ingredient Use Restrictions	Product Names (EPA #) Registrant
Aminopyralid	Milestone (62719-519) (Product Review) Opensight (62719-597) (Product Review) DOW AgroSciences
Glyphosate Lowest Labeled Rate for all Glyphosate products	Round Up Pro (524-475) Monsanto
	Glypro-Plus (62719-322) Accord Concentrate or Rodeo (62719-324) DOW AgroSciences

Aquaneat Aquatic Herbicide (228-365)

Razor (228-366)

Razor-Pro (228-366)

Nu Farm Americas

While Accord Concentrate, Rodeo, Glyphosate VMF and Aquaneat all have aquatic uses, approval for their use as sensitive materials does NOT mean that they can be used for aquatic weed control, or directly applied to water, as part of a rights of way management program. Products are subject to the no-spray and limited spray provisions of 333 CMR 11.04.

Metsulfuron Methyl

Lowest Labeled Rate for all Metsulfuron Methyl Products*

Escort XP (432-1549)

Bayer CropScience

Escort XP (352-439)

EI Dupont

Patriot Selective

Herbicide, (228-391)

Nu Farm Americas

Sulfometuron Methyl

Lowest Labeled Rate for all Sulfometuron-Methyl Products*

Oust XP (432-1552)

Bayer CropScience

Oust XP (352-601)

EI Dupont

Spyder Selective

Herbicide (228-408)

Nu Farm Americas

**Metsulfuron Methyl
Sulfometuron Methyl**

Lowest Labeled Rate*

Oust Extra (432-1557)

Bayer CropScience

Oust Extra (352-622)

EI Dupont

**Ammonium Salt of
Fosamine**

Lowest Labeled Rate*

Krenite S (352-395)

EI Dupont

Krenite S (42750-247)

Albaugh, Inc.

Imazapyr

3 pints/acre every 3rd year OR
2 pints/acre every other year for all Imazapyr Products

Arsenal (241-346)

Arsenal Powerline (241-431)

Arsenal Railroad Herbicide (241-273)

BASF

Polaris AC Complete

Herbicide (228-

570) (Product Review)

Polaris Herbicide (228-

534)

Nu Farm Americas

Triclopyr, Butoxy Ethyl Ester

The lowest of the following rates:

Garlon 4 (62719-40)

Dow AgroSciences

Garlon 4 Ultra (62719-527)

Dow AgroSciences

1. Between 10 feet and 50 feet of the resource:

Lowest labeled rate* or 0.5 pints per acre

2. Between 50 feet and the boundary of the limited spray

zone: Lowest labeled rate* or 3 pints per acre

Paclobutrazol

Lowest Labeled Rate*

Cambistat (74779-3)

Rainbow Tree care

* **Lowest labeled rate** the minimum labeled rate of the pesticide product for the appropriate site, pest and application method

Disclaimer

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