

**VEGETATION MANAGEMENT PLAN
FOR
SPRINGFIELD TERMINAL
RAILWAY COMPANY
PAN AM RAILWAYS, INC.
2011 to 2015**

Prepared for:

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1.0 INTRODUCTION

This document details a five (5) year Vegetation Management Plan (VMP) for Rights-Of-Ways of the Springfield Terminal/Pan Am Railways, Inc. (The Railroad), a Division of Guilford Transportation, Inc. of North Billerica Massachusetts. The VMP addresses the intended program to be carried out by the Railroad for the control of nuisance vegetation within their Rights-Of-Way (ROW) that may interfere with safe railroad operations. The plan includes: a statement of goals and objectives related to vegetation management; a description of the ROW; identification of components and vegetation categories targeted for control; the methods intended for control and management of vegetation; the rationale and justification for the proposed vegetation management techniques and herbicide applications; timing of herbicide applications; the operational strategies and requirements to be followed by the Railroad and application contractors; equipment used for vegetation control; the techniques used for identification of sensitive areas and control strategies for sensitive areas; Integrated Pest Management Techniques and alternative control techniques used to minimize the frequency of herbicide applications; emergency/contingency measures to be implemented to prevent, control, or clean up a possible spill of herbicides; alternative land use provisions and the qualifications of the people preparing this plan.

2.0 GENERAL DESCRIPTION OF THE SPRINGFIELD TERMINAL/PAN AM RAILWAYS, INC.

The railroad has been in operation for approximately 150 years and has for the past 24 years been owned and operated by Guilford Transportation, Inc. The Railroad main line passes through eighty-eight (88) Massachusetts communities. It runs north to south from the Massachusetts/Vermont State line in Northfield to Springfield and from Ayer south to Worcester. The railroad also runs from Boston and other easterly points northward to the Massachusetts/New Hampshire State Line in Haverhill and westward to the Massachusetts/New York State Line in Williamstown. A list of communities in which the Railroad has right-of-way ownership, and therefore may be affected by vegetation management activities is as follows:

Acton	Adams	Andover	Ashburnham
Athol	Ayer	Belmont	Bernardston
Billerica	Boston	Boxborough	Buckland
Cambridge	Charlemont	Charlestown	Chelmsford
Chelsea	Chicopee	Clinton	Concord
Conway	Danvers	Deerfield	Devens
Easthampton	Erving	Everett	Fitchburg
Florida	Gardner	Greenfield	Groton
Harvard	Hatfield	Haverhill	Holyoke
Lancaster	Lawrence	Leominster	Lincoln
Littleton	Lowell	Lunenburg	Lynn
Lynnfield	Malden	Medford	Melrose
Methuen	Montague	North Adams	North Andover
North Reading	Northampton	Northfield	Orange
Peabody	Phillipston	Reading	Revere
Rowe	Royalston	Salem	Saugus
Shelburne	Shirley	Somerville	Springfield
Sterling	Stoneham	Swampscott	Templeton
Tewksbury	Tyngsborough	Wakefield	Waltham
Watertown	Wendell	Wenham	West Boylston
Westford	Westminster	Whatley	Williamstown
Wilmington	Winchendon	Woburn	Worcester

See Appendix A

3.0 GOALS AND OBJECTIVES OF THE VEGETATION MANAGEMENT PLAN

This VMP was prepared in the interests of safety and welfare of railroad personnel and the general public. These interests are protected by providing the Railroad with operational standards and procedures necessary to implement an effective vegetation management program, while providing municipalities and regulatory agencies, as well as Railroad employees, with the information necessary to monitor vegetation management activities for the insurance of a safe and healthy environment. The VMP describes methods utilized by the Railroad to control or eradicate vegetation growing adjacent to and within the road bed using herbicides, mechanical equipment, proper planning and management practices, and Integrated Pest Management Techniques in order to minimize the amount of herbicide used. Such a need for vegetation control along the Railroad's ROW stems from regulatory statutes governing the railroad industry's safe operation, and from a practical evaluation of the processes, which lead to the degradation of a roadbed. Although the Railroad currently only treats the ballast area, switch boxes, signals and signposts with herbicides, the railroad reserves the right, after expanded sensitive area approval, to treat brush under communication lines.

Pursuant to Article 49 Code of Federal Regulations (CFR) ss 213.37, railroads are required to control vegetation in order to alleviate the potential of fire, to provide railroad employees with unobstructed visibility of the track and road bed components from their normal duty stations, and, during routine inspections, to allow clear visibility of signs and signals, the safe performance of normal duties of Railroad personnel, and to prevent damage to or malfunction of signal and communication lines. The Railroad will incorporate the proposed vegetation control techniques along with sound management, planning and record keeping practices in order to meet or exceed the safety requirements imposed by state and federal regulations. It is also the Railroads' intent to minimize the need for herbicide use as part of their vegetation management program.

Subject to approval of this VMP by the Massachusetts Department of Agricultural Resources (DAR), the railroad will prepare on an annual basis a Yearly Operation Plan (YOP) which will provide specific information about the vegetation management program to be carried out for the specified year. This YOP shall contain all information required by the DAR and will be submitted to the DAR for its review, comment and subsequent approval. Copies of the YOP or a web site where the VMP can be viewed will be submitted to the senior administrative official, Conservation Commission and Board of Health for each affected community listed in the YOP. The municipal officials and general public shall have 45 days, upon receipt, to review the YOP and submit comments to the DAR. Following the review and comment period, the DAR will provide the Railroad with formal notice of approval or denial of the YOP, or request modification as necessary.

4.0 INTEGRATED PEST MANAGEMENT TECHNIQUES

In order to reduce the amount and frequency of herbicide application, the Railroad will implement Integrated Pest Management Techniques (IPM). This includes the performance of a survey of the ROW with the goal of the elimination from its spray schedule those areas that are not infested with undesirable vegetation. This would be dependent on herbicides proposed for any given year and would not include the implementation of a pre emergent program. The survey will include the identification of the undesirable vegetation in order to select herbicides most suited for the control of those species. The survey shall also include identification and recording of areas adjacent to the roadbed section of the ROW where vegetative conditions are found to be favorable to the interests of the railroad. For example, grasses or other low growing herbs that occur within the roadbed are undesirable, whereas their occurrence in areas below the communication lines is tolerable as they do not interfere with the communication lines or obscure the vision of railroad personnel. Non-selective use of herbicides or mechanical means of vegetation control will be avoided in these areas. Additionally, the conditions, which appear to contribute to a lack of or abundance of favorable vegetation, will be noted, and efforts made to alter those conditions in order to achieve the desired conditions. Such conditions that may affect the presence or absence of undesirable vegetation include regional topography, drainage, availability of sunlight, nutrients, and in the case of the ballast, the potential for soil and detritus accumulation. The railroad will implement this integrated approach to vegetation management by encouraging plant communities that hinder the development of target vegetation.

5.0 RIGHT-OF-WAY COMPONENTS AND JUSTIFICATION FOR HERBICIDE USE

5.1-ROADBED

The railroad ROW is comprised of the roadbed and the areas adjacent to the roadbed. Components of the roadbed are the steel rails and wooden ties that are supported on a bed of crushed traprock, known as ballast. The sloped sides of the ballast are referred to as the shoulder. Figure 1 (Appendix B) depicts a typical roadbed layout. Vegetation growing within the roadbed can cause several safety and functional problems for the Railroad. Excessive vegetation within the roadbed can hinder visibility of the tracks and roadbed components during track inspections and normal operations. Vegetation may also present physical hazards to Railroad personnel while working alongside rail equipment such as boxcars and locomotives. Vegetation may cause personnel to trip, slip or fall, which could result in serious injury or death. Vegetation in the roadbed can also result in the accumulation of soils and organic matter within the ballast section, which may inhibit drainage and weaken the structural integrity of the roadbed. As the height and density of the roadbed weeds increase, they become crushed against the wheel of trains, thereby reducing the effectiveness of the braking system, which increases the risk of accidents. The term “weeds” as used in this plan refers to any vegetation growing within the roadbed section of the ROW.

During dry months, weeds and brush can ignite from sparks created by the wheels and undercarriage of the trains. Brush fires may also be ignited along the roadbed from external sources such as vandals, discarded cigarettes dropped by pedestrians or from passing motor vehicles. Since most wooden rail components such as the rail ties and trestle timbers are treated with creosote or other flammable wood preservatives, brush fires can easily accelerate, resulting in damage to the roadbed components, communication lines and the disruption of the Railroad as a whole. Weed eradication in the early growth stage is essential, as growing root systems tend to assist in the accumulation of soil within the ballast, resulting in additional weed propagation. Based upon the aforementioned factors, weeds growing within the roadbed shall be targeted for complete control by the use of herbicides.

5.2- DRAINAGE DITCHES

One of the most important components of the Railroad ROW are drainage ditches, which parallel the roadbed on each side of the shoulder. Rapid drainage of stormwater away from the roadbed is essential to maintain its structural integrity. If saturation of the ground below the roadbed occurs, the weight of the trains could cause the roadbed to sink into the underlying mud, which results in damage to the track sections and reduces the stability of the passing rail traffic, potentially resulting in a train derailment. For this reason the roadbed is designed to allow for quick stormwater drainage. If the ballast is maintained free of weeds and soil, stormwater can pass easily through the roadbed allowing the runoff to collect in the adjacent drainage ditches.

In areas where the drainage ditches are not kept free of sediments and nuisance vegetation (see Section 6.0), the ditches tend to pond water rather than promote free drainage. The problem is compounded by the fact that some drainage ditches have developed hydrophytic (wetland) plant communities. Where no direct hydraulic connection occurs between drainage ditches and viable wetlands, the ditches shall be maintained by selective application of herbicides or mechanical trenching equipment. No herbicides shall be applied when standing water is present. Treatment of ditches shall only occur during dry periods using only those herbicides, which have been recommended by the DAR for use in sensitive areas.

5.3- BRIDGES AND ABUTMENTS

Wooden or steel railroad bridges generally do not have the capability to trap soils and allow for vegetative growth and therefore will not be treated with herbicides. Vegetation can grow between gaps and cracks and in stone abutments, footings, or foundations and loosen the stone, brick, or concrete. Vegetation growing in and around these structures will be maintained by both mechanical cutting and by selective herbicide application, as allowed, when mechanical means are not practical.

5.4- SWITCH BOXES, SIGNALS, AND SIGNPOSTS

Federal law (40 CFR 213.00) requires railroads to control vegetation around switch boxes, signals and signposts to allow for complete visibility by train engineers, inspectors, passing motorists, and pedestrians. Unless this task can be accomplished quickly and effectively by mechanical means, these areas will most often be controlled, as allowed, by herbicide application. Herbicides in these areas will be manually applied by the licensed applicator utilizing a hose with spray nozzle attached to the hy-rail vehicle. The area within a 10-foot radius of switches, signals and signposts will be maintained free of weeds.

5.5- COMMUNICATION LINES

The Railroad utilizes overhead communication lines that parallel the roadbed. The vegetation present in the areas below the communication lines must be maintained free of dense brush or trees to prevent damage and to allow access to the lines and associated poles for periodic and emergency services. Lines may become shorted out if contact is made with tree limbs or creeping vines. They may also be knocked down if struck by falling limbs or branches. Some nuisance vegetation, such as tree limbs or branches may be controlled effectively by mechanical pruning, however, other problematic vegetation, such as poison ivy, which may attach itself to the utility poles and continue to spread along communication lines, is better controlled by herbicides. Mechanical means of poison ivy removal may result in direct contact with the plant by the equipment operator, which could pose a risk to the health of the operator. In general, tree limbs will be pruned when they overhang or are near the point of direct contact (within 2 to 5 feet) with communication lines.

6.0-IDENTIFICATION OF TARGET (NUISANCE) VEGETATION

6.1-WEEDS

The term “weeds” as used in this plan refers to any vegetation growing within the roadbed section of the ROW. Weeds shall be targeted for complete eradication. Weeds frequently found within the roadbed include grasses, sedges, forbs, tree and shrub seedlings, and creeping vines. Control of weeds within the roadbed can only be achieved cost effectively and efficiently through the discriminate use of herbicides.

6.2-BRUSH

The term “brush” as used in this plan refers to any low moderate height woody or non-woody vegetation growing in areas adjacent to the roadbed. Brush present in areas adjacent to the roadbed will be controlled whenever visibility of signals, signposts, crossings and adjacent rail lines are obstructed, and when encroaching upon communication lines adjacent to the roadbed. Vegetation along the inside of curves will be managed to provide the train’s engineer with adequate visibility of track conditions, persons, animals or foreign objects present ahead of the train, and for observation of the train’s performance.

6.3-TREES

The term “trees” as used in this plan refers to any woody plant species, which are supported by a single stem or trunk, and are capable of reaching heights greater than 10 feet. Trees will be targeted for maintenance when limbs or branches encroach upon railroad bridges or the communication lines located adjacent to the roadbed. Tree maintenance will occur when the trees or branches obscure the train engineer’s vision of the roadbed components, signals, or road crossings. Tree maintenance will be achieved using mechanical cutting methods, followed by a stump treatment with herbicides when appropriate.

6.4-VINES

The term “Vines” as used in this plan shall refer to any creeping or climbing plants. Vines will be controlled through herbicide applications and mechanical cutting when they encroach upon communication lines, utility poles, signals, and the roadbed components.

6.5-DESIRABLE VS UNDESIRABLE VEGETATION

“Desirable vegetation” refers to any vegetation, which does not interfere with railroad operations. Conversely “undesirable vegetation” is any vegetation which due to its species characteristics, or location in the ROW, interferes in railroad operations. For example, grasses or other low growing herbs that occur within the roadbed are undesirable, whereas their occurrence in areas below the communication lines is tolerable as they do not interfere with the communication lines or obscure the vision of railroad personnel. Shrubs and trees located along the outer limits of the ROW (usually 30 to 50 feet from the centerline of the roadbed) provide an aesthetically pleasing visual barrier between the ROW and nearby residential areas. However, this type of vegetation may pose a visual obstruction at roadway crossings. As mentioned in Section 4, Integrated Pest Management Techniques will be utilized to minimize the use of herbicides.

7.0 METHODS OF VEGETATION MANAGEMENT

Before implementing a vegetation control program, the Railroad will periodically re-evaluate problematic areas along the ROW, and select the vegetation control methods(s) most suited to conditions encountered. Integrated Pest Management Techniques will be implemented. For areas where herbicides are deemed the suitable means of vegetation control, herbicide selection will be based upon its ability to control the undesirable vegetation present within the target area. The various vegetation control methods to be implemented along the Railroad's ROW are discussed in the following sections.

7.1-VEGETATION CONTROL TECHNIQUES

Vegetation can be controlled along the ROW by herbicide applications and mechanical means. However, both techniques have their advantages and limitations depending upon where, when, and how they are implemented. The only available technology feasible for complete eradication of vegetation within the roadbed is through herbicide applications. Mowing or hand weeding around the track components would be an impractical, if not impossible task to accomplish successfully based upon the amount of time and manpower that would be required. Mowing would not remove the entire root system, resulting in regrowth of the plants in a short period of time. Herbicides are currently the most effective and practical means of obtaining total vegetation eradication within the roadbed. However, their use is restricted by weather conditions as well as by regulatory constraints that prohibit their use in certain designated sensitive areas (See Chapter 8.0).

Vegetation below communication lines, along inside curves, and at road crossings, will be managed using a combination of herbicide and mechanical control methods. The methods selected will be dependent upon the degree of vegetation control needed, the class and species of vegetation (desirable vs. undesirable, see Chapter 6.0), and sensitive area restrictions that may apply to the target area (see Chapter 8.0). Specific methods of vegetation control to be implemented along the Railroads ROW are discussed in Section 7.2.

7.2 HERBICIDE APPLICATION EQUIPMENT AND METHODS

7.2.1 Hy-rail Equipment and Uses

Hy-rail vehicles are trucks or utility vehicles that are equipped with roller wheels that lower onto the steel rails of the track allowing the vehicle to ride on the track. The hy-rail equipment allows for performance of herbicide applications to the ROW from the railroad tracks thereby alleviating the need for traversing rough terrain. The spray truck is equipped with a water tank, and a separate herbicide mixing tank. In addition to the spray vehicle, a hy-rail spotter vehicle, which is in radio contact with the applicator, will ride ahead of the applicator to assist in the identification of sensitive areas.

Hy-rail vehicles are equipped with spray booms that have a series of spray nozzles that apply a low-pressure (30 to 60 pounds per square inch) spray of herbicide directly to the roadbed from a height of approximately 18 inches above the ballast. The boom is also equipped with side spray guards that prevent drift of herbicide to non-target areas. The spray boom is controlled from within the cab of the spray vehicle. Multiple controls allow the applicator to direct the spray of herbicide to any portion of the roadbed, or to the entire surface area. For example, if weeds are present in the center of the roadbed, but the shoulder areas are free of vegetation, the applicator can selectively treat the center of the roadbed, thereby eliminating unnecessary herbicide application to the shoulders. The maximum width of the spray boom is variable depending upon hy-rail equipment used, but is generally between 16 and 20 feet. Some hy-rail spray vehicles are also equipped with spray hoses and extended nozzles that can be used to apply herbicides, via low pressure spray, to vegetation growing around switches, signals, and sign posts. The hy-rail equipment can also be affixed with extension booms capable of reaching drainage ditches and areas below communication lines.

To further control drift of herbicide, anti-drift agents are added to the herbicide solution. All herbicide applications shall be conducted by a qualified certified applicator in the Commonwealth of Massachusetts.

7.2.2 Foliar Application

Foliar application refers to the application of herbicides to the leaves and stem of plants using a low-pressure spray. Low-pressure spray equipment used by applicators is operated at pressures between 30 and 60 PSI. Proper application of herbicides by low-pressure spray equipment allows for complete coverage of the target vegetation and the reduction of overspray or airborne drift which can result from high-pressure spray equipment. High-pressure spray equipment is generally used for herbicide treatment to high branches of trees, or for reaching vegetation from a significant distance. Since high-pressure herbicide applications do not allow for selective treatment to the target vegetation, and do not allow for adequate control of herbicide drift, high-pressure herbicide application methods to the ROW will not be performed.

The method of herbicide application to the roadbed as described in the previous subsection is one method of foliar application performed as part of a post-emergent spray program. Selective foliar application may also be performed to control vegetation around signals, sign posts, switch boxes, or around buildings. As mentioned previously, all applications of herbicides shall be performed by a certified applicator with hose and sprayer either attached to the spray vehicle or small tank.

This method may also be used for side trimming trees to eliminate nuisance branches without destroying the entire tree. Side trimming using herbicides shall not be performed to trees at heights greater than 20 feet, and will only be performed when the Railroad's Vegetation Control Engineer or contractor determines the method to be more suitable than alternative control methods, such as hand pruning.

7.2.3 Stump Treatment

When mature trees are removed along the ROW, a stump treatment may be applied to the cut surface to prevent re-sprouting of the tree. The herbicide stump treatment can be "painted" onto the stump using a brush or applied by squirting the stump using a low-pressure spray. Trees to be removed shall be marked by personnel in the field prior to treatment.

7.3 MECHANICAL EQUIPMENT

Mechanical means of vegetation control is implemented along the Railroad ROW when the use of herbicides is prohibited, or when a combination of mechanical cutting and herbicide applications is found to be the most suitable means of achieving total pest control. Throughout the term of this VMP, the railroad shall work to incorporate Integrated Pest Management practices. Examples of this may include the introduction of grasses or low growing shrubs to control undesirable vegetation under communication lines.

Mechanical means of vegetation control will be limited to nuisance woody and brush species that are found to be interfering with railroad operations occurring in the areas adjacent to the roadbed. No mechanical means of vegetation control is feasible within the ballast area of the roadbed.

Mechanical management of vegetation along the areas adjacent to the roadbed is most frequently and effectively performed by the use of high power mowing equipment. The mowing equipment is comprised of specialized cutting heads mounted on hydraulic arms which extend laterally, and are capable of reaching and pruning high branches or limbs which may obstruct communication wires, signals, bridges, or trestles, the view of personnel, passing motorists, and pedestrians. Mowing equipment can also be mounted on all-terrain vehicles to allow for movement and access through areas beyond the reach of hy-rail equipment.

Mechanical means of vegetation control may also be performed using chain saws and other hand tools, as well as portable weed cutters, when the use of rotary mowing equipment is not practical, and/or when selective vegetation management is desired. It is important to note that mechanical cutting equipment may pose a threat of risk to the health and safety of the operators as well as bystanders, especially if used by inexperienced persons. Therefore, only qualified individuals will use mechanical cutting and pruning equipment.

7.4 WEED CONTROL AS A SECONDARY BENEFIT

As part of the Integrated Pest Management, certain non-vegetation control activities may result in control or eradication of vegetation as a secondary benefit. Such activities may include periodic repair or replacement of rails, ties, or ballast. Scouring or retrenching drainage ditches will also eliminate weeds immediately adjacent to the roadbed and reduce the spreading of weeds via shoots, vines, or windblown seeds onto the roadbed. Trenching or other railroad maintenance activities other than herbicide applications may be subject to approval under Massachusetts Wetland Regulations, if performed in or within the regulated distance of a wetland.

7.5 SELECTION AND TIMING OF HERBICIDE APPLICATIONS

Selection of herbicides to be used in a given season will be dependant upon the timing of the application, the location of the target area with regard to sensitive area boundaries, and the species of nuisance vegetation present within the ROW. An evaluation of vegetation density and species identification along the roadbed of the main lines and branches will be made either during the late summer or fall proceeding the scheduled vegetation management season or during the early months of the growing season. Based upon the evaluation, the type of herbicide best suited for controlling observed nuisance vegetation will be selected.

7.5.1 Pre-Emergent Herbicide Program

The pre-emergent herbicide program involves the application of herbicides at the beginning of the growing season before weeds have emerged from the ground. The herbicide takes effect after the newly developed roots of seedlings absorb it. The pre-emergent program is restricted to highly problematic sections of the roadbed. Pre-emergent herbicides selected will be highly immobile and have moderate residual presence in the soil after application. Only those herbicides that are on the approved list for pre-emergent application shall be utilized.

Problematic roadbed areas that are scheduled for treatment shall be inspected in the late summer or fall of the preceding year. The inspection shall estimate the density of the vegetation and identification of the target species. Herbicide selections shall be based on this inspection. The pre-emergent program will be scheduled for the spring. Herbicide application will not take place under frozen ground conditions.

7.5.2 Post-Emergent Herbicide Program

The post-emergent herbicide program involves the application of herbicides to the roadbed from a hy-rail truck after the target vegetation has emerged from the ballast. A selective application to areas adjacent to the roadbed shall be manually applied by the licensed applicator using a hose and spray nozzle attached to the hy-rail vehicle. Herbicides that are absorbed through the roots, stems, or leaves of the target vegetation

may be used. The post-emergent program shall be performed after mid-May. No-post emergent herbicide applications shall occur after the end of the regional growing season. Ideally, the post-emergent program is most effective when performed within the time period from June through August, as most nuisance plant species have reached full emergence and can be readily targeted by the herbicide applicator.

7-6 TOUCH-UP APPLICATIONS

Following a post-application survey of ROW conditions, it may be necessary to perform touch-up applications of herbicides to densely vegetated areas during the same growing season. No more than 10% of the initially identified target vegetation on the ROW in any municipality may be treated during touch-up application and the total amount of herbicide in any year shall not exceed the limits specified on the label or the YOP (per 11.03 (8)(c)). Touch-up applications shall be performed using low pressure foliar or stem application methods. Touch-up applications will be performed within 12 months of initial treatment to a designated sensitive area.

8.0 METHODS FOR IDENTIFICATION OF SENSITIVE AREAS AND CONTROL STRATEGIES PROPOSED FOR SENSITIVE AREAS

8.1-REGULATORY DEFINITIONS OF SENSITIVE AREAS AND ASSOCIATED RESTRICTIONS

The Massachusetts Pesticide Board Regulations 333 CMR 11.00, defines sensitive areas for the purpose of implementing a vegetation management program involving the application of herbicides in any area within the ROW, including but not limited to the following, in which public health, environmental or agricultural concerns warrant special protection to further minimize risk of unreasonable adverse effects (See Appendices B and C):

- (a) within the primary recharge zone of a public drinking water supply well;
- (b) within 400 feet of any surface water used as a public water supply;
- (c) within 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 200 feet, for 400 feet upstream, on both sides of the river, of a Class B drinking water intake;
- (e) within 100 ft of any identified private drinking water supply well;
- (f) within 100 feet of any standing or flowing water;
- (g) within 100 feet of any wetland;
- (h) within 100 feet of any agricultural or inhabited area.
- (i) within a riverfront area.
- (j) within certified vernal pool habitat.

The Massachusetts Pesticide Board Regulations establish restrictions pertaining to herbicide applications within designated sensitive area boundaries. The regulations further require the ROW owner to identify and delineate sensitive areas, which are not readily identifiable in the field, and to affix permanent markings to identify appropriate no spray and restricted spray setbacks. Those areas that are not considered to be readily identifiable in the field are (a) through (j) above. Agricultural and inhabited areas are generally readily visible from the ROW; therefore no permanent markings are required. It is important to note that "agricultural areas" includes, but is not limited to, actively grazed pastures, private gardens, animal pens and corrals, as well as active commercial food crop and non-food crop fields.

Pursuant to 333 CMR 11.00, no herbicides shall be applied on or within 10 feet of standing or flowing surface water (other than surface water supplies), or within 10 feet of a wetland or certified vernal pool. Herbicides can be applied between 10 feet and 100 feet of the aforementioned areas and riverfront areas provided that 12 months has elapsed between applications. The herbicide must be applied selectively by low-pressure foliar techniques or stem application and the DAR must have approved the herbicide for use in sensitive areas.

No herbicides shall be applied within a Zone I of a public groundwater source, within 100' of any Class A public surface water source, within 100' of any tributary or associated surface water body where the tributary or associated surface water body runs within 400' of a Class A surface water source, or within 10' of any tributary or associated surface water body where the tributary or associated surface water body is at a distance greater than 400' from a Class A surface water source, within a lateral distance of 100' for 400' upstream, on both sides of the river, of any Class B drinking water intake, and a 50-foot radius around a private well. Herbicides may be applied between 100 and 400 feet of a surface water supply or its tributaries provided that the herbicides are applied selectively by low-pressure foliar techniques. The herbicide used must be approved by the DAR for use in sensitive areas and the application can only occur once every 24 months. Also, herbicides may be applied within the primary recharge area of a public well (Zone II) provided that the herbicide is applied selectively by low-pressure foliar techniques. This herbicide must be approved by the DAR for use in sensitive areas at least 24 months must have elapsed from the last application.

No herbicides shall be applied within 100 feet of an agricultural or inhabited area unless the herbicide is approved for use in sensitive areas using low-pressure foliar techniques and a minimum of 12 months has lapsed since the last application.

8.2- IDENTIFICATION, DELINEATION AND MARKING OF SENSITIVE AREAS

8.2.1- Wetlands, Waterbodies, and Watercourses

The Massachusetts Wetlands Protection Act Regulation 310 CMR 10.02 (1) (a) – (f) define resource areas subject to protection under the acts as:

- | | | | |
|-----|--|-----------------|---|
| (a) | Any bank,
any freshwater wetland,
any coastal wetland,
any beach,
any dune,
any flat,
any marsh,
any swamp
any certified vernal pool | bordering
on | The ocean
any estuary
any creek
any river
any stream
any pond
or any lake |
| (b) | Land under any of the waterbodies listed above | | |
| (c) | Land subject to tidal action | | |
| (d) | Land subject to costal storm flowage | | |
| (e) | Land subject to flooding | | |
| (f) | Riverfront area | | |

For the purposes of managing the Railroad's ROW, (a) through (c) above shall be afforded the same degree of protection and considered sensitive areas under Rights of Way Management Regulations 333 CMR 11.00.

The following are brief definitions of (a) through (c) above as defined in 310 CMR 10.00:

- (a) Bordering Vegetated Wetlands- are freshwater wetlands which border on creeks, rivers, streams, ponds and lakes. Types of freshwater wetlands include wet meadows, marshes, swamps, certified vernal pools, and bogs.
- (b) Land Under Waterbodies and Waterways- consists of the land beneath any creek, river, stream, pond or lake.
- (c) Land Subject to Tidal Action- means land subject to the periodic rise and fall of a coastal waterbody, including spring tides.

Land subject to coastal storm flowage (d) and land subject to flooding (e) are not defined as wetlands under 333 CMR 11.02.

Floodplains, or Bordering Land Subject to Flooding are defined as "an area with low, flat topography adjacent to and inundated by floodwater rising from creeks, rivers, streams, ponds, or lakes. It extends from the banks of these waterways and waterbodies; where a bordering vegetated wetland occurs, it extends from said wetland". Floodplains may or may not meet the defining characteristic of a wetland and therefore may not be subjected to the herbicide application restrictions established in 333 CMR 11.00; unless standing water is present at the time of herbicide application.

Riverfront area (f) is defined as the area of land between a river's mean annual high water line measured horizontally outward from the river and a parallel line located 200 feet away. Riverfront areas shall also be treated as sensitive areas under 310 CMR 11.00.

Each year that a YOP is prepared a copy shall be sent to the Natural Heritage and Endangered Species Program (NHESP) for their review. Any recommendations made by NHESP with respect to avoidance, minimization, or mitigation of impacts to endangered, threatened, or special concern species will be incorporated into the program.

For each community in which the Railroad ROW is scheduled for treatment with herbicides, the wetlands, watercourses, and waterbodies within 100 feet of the ROW were located in the field by wetland specialists. Wetland boundaries were determined as described in 310 CMR 10.00.

The limits of the 10 foot no spray and the 100 foot "restricted application" buffer zones were measured and marked on the roadbed with a color-coded marking system approved by the DAR. This marking system will be discussed in section 8.3. The locations of these markings were drawn on a map of the ROWs, which is carried in both the spotter vehicle and the spray vehicle.

Upon completion of the mapping a Request for Determination for approval of the wetland boundary was filed with each affected community. Determinations issued by the conservation commissions are valid for 5 years or the life of the VMP. See Appendix D and E.

8.2.2- Public Water Supplies and Aquifer Recharge Areas

Public water supplies for each of the affected communities are identified on a yearly basis by reviewing Groundwater Protection Atlas Overlays and Resource Priority Maps available at the Massachusetts DEP regional offices or online. Public water supply information is also available from local health officials and water departments. Aquifer protection zone maps identify Zone II for public water supply wells. For those communities that have not delineated the Zone II recharge areas for their water supplies, the Zone II boundaries shall be considered the area within a one half mile radius of the well head.

For each public water supply well identified within 400 feet of the ROW the well head was located in the field and a 400 ft. no spray zone was marked on the rail bed utilizing the approved color coded marking system identified in section 8.3.

Public surface water supplies and their tributaries identified within 400 feet of the ROW were located in the field, and the 100-foot no spray and 400-foot restricted spray zones marked on the rail bed.

The 200 foot restricted spray areas of any tributary or associated surface water body which runs outside the Zone A of a Class A water source were also marked in the field, and the 200 foot restricted spray zone for 400 feet upstream of a Class B drinking water intake are also marked on the rail bed.

The location of no spray and restricted spray areas are depicted on the ROW maps (scale 1" = 100') showing the locations of sensitive areas.

8.2.3 – Private Water Supply Wells

Pursuant to 333 CMR 11.00e, the DAR shall request locations of private drinking water supplies located along the ROW from the Department of Environmental Management and local Boards of Health. The Railroads shall consult with the DAR with regard to private well locations and accordingly locate any registered private wells in the field. The railbed was marked in the field as described in section 8.3 and the location of these wells referenced on ROW maps indicating sensitive areas.

8.2.4 – Sensitive Areas Readily Identifiable in the Field

Sensitive areas readily identifiable in the field include agricultural areas and inhabited areas as described in Section 8.1. Due to their visibility, these areas are not depicted on the maps of sensitive areas. During herbicide application, a sensitive area spotter vehicle will proceed along the ROW in front of the spray vehicle and provide warning via radio of any upcoming sensitive areas. The applicator shall abide by all spray restrictions established in 333 CMR 11.04(5) and incorporated into this plan.

8.3- SENSITIVE AREA MARKING SYSTEM

No spray areas are those in which herbicide spraying is prohibited. It includes track within 400 feet of a public water supply wetland, 100 feet from a public surface water supply, within 100 feet of any tributary or associated surface water body which runs within 400 feet of a Class A surface water source, within 10 feet of any tributary or associated surface water body which is at a distance greater than 400 feet from a Class A surface water source, a lateral distance of 100 feet, for 400 feet upstream, on both sides of the river, of a Class B drinking water intake, a 50-foot radius around a private well, and 10 feet from the edge of standing or flowing water, or wetlands, and within 10 feet of certified vernal pools and mean annual high water line of rivers.

Limited-spray areas are those in which spraying is restricted to one annual application of herbicides through a low-pressure foliar techniques. This includes track between 10 and 100 feet from the edge of standing or flowing water, or wetlands, between 10 feet of the mean annual high water line and the outer boundary of the Riverfront Area, between 10 feet and the limit of the outer boundary of Certified Vernal Pool Habitat, lengths of track within the primary recharge area around a public water supply wellhead, between 100-400 feet from the edge of a public surface water supply, a lateral distance of between 100-200 feet for 400 feet upstream, on both sides of the river, of a Class B drinking water intake, a distance of between 10-200 feet of any tributary or associated surface water body which runs outside the Zone A for a Class A water source, and between 50 and 100-foot radius around a private well.

Spraying is restricted to one application every other year of a herbicide approved by the DAR through low-pressure foliar techniques for water supply areas.

Only herbicides on the DAR's "Sensitive Area Material List" shall be used for application within sensitive areas.

Non-sensitive areas, which are upland areas and/or lengths of track without proximate sensitive areas do not require specific precautions or herbicide restrictions.

The limits of sensitive areas, no-spray areas, limited-spray areas and non-sensitive areas are marked in the field with permanent color-coded markers. These markers are reviewed yearly to insure visibility during spraying operations. Sensitive areas considered to be readily identifiable in the field (i.e. agricultural and inhabited areas) will not be marked. The markers will be one or any combination of the following:

- color-coded signs attached to posts
- color-coded signs attached to railroad ties
- color-coded painted rail sections.

8.3.1 Wetland, Watercourses and Waterbodies

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

Blue – Limits of Buffer Zone and Restricted Spray Zone. Represents a 100-foot buffer zone from a resource area, or the limit of a 200 foot riverfront area. In restricted spray zones, only DAR recommended herbicides can be applied selectively by a low pressure (60 psi) foliar or stem application.

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

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

8.3.2 Public and Private Water Supplies

Red- Zone II or private well recharge zone or buffer zone of public surface water supply. This color indicates that the applicator is in an aquifer recharge zone or the buffer zone of a public surface water supply as defined in 8.2.2 above. In this zone only DAR recommended herbicides can be applied by low pressure foliar or stem applications, with a minimum of 24 months between applications.

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

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

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

9.0 – OPERATIONAL REQUIREMENTS OF APPLICATORS

9.1 – Licensing Requirements

No railroad personnel or contractor may apply or supervise the application of herbicides to the ROW unless they are certified by the DAR in the category of Rights-of-Way Pest Control, pursuant to Massachusetts Pesticide Board Regulations 333 CMR 11.00.

9.2 – Inspections and Record Keeping

Several weeks prior to the application of herbicides the vegetation control engineer or other qualified personnel shall perform a review of the ROW in order to evaluate the need for herbicide treatment, and identify target vegetation. Conditions shall be noted on a form that asks for the following information:

The date and time of the review and the person conducting the review,

Location of the ROW, which includes the town the ROW is located in and the mile post where the vegetation is located.

A description of the density of the vegetation within the problem area and identification of nuisance species.

Type of herbicide previously applied and the date it was applied.

General condition of the area where the nuisance vegetation occurs.

All evaluation forms will be kept by the railroad and utilized in the development of the YOP.

For each day of herbicide application, the applicator shall complete a daily field report which shall include as a minimum, the location of the areas sprayed, date of application, weather conditions, equipment used, herbicides, carriers, and adjuvants used, quantities used, people on site, and the starting and completion time. Sample copies of a typical field report and spray log are included in Appendix F, courtesy of Railroad Weed Control, Inc. of Westfield, Massachusetts.

9.3 – Conformance with Regulatory Notification Requirements

The railroad shall comply with all regulatory requirements concerning notification to affected municipal agencies. At least twenty-one (21) days prior to commencing herbicide applications, the railroad, or its designated representative, shall submit written notification of the intended spray program and application date, to the senior ranking town or city official (Mayor, Town Manager, First Selectman, or Board of Selectman) and conservation commission of each municipality. Formal notification shall be made by

registered mail (as per Chapter 85 of Act of 2000), and include the approximate date and time of application. A copy of the DAR approved YOP and Environmental Monitor notice will be sent under separate cover (via certified mail) to the senior ranking town or city official, board of health, and conservation commission in each community.

Notification may coincide with the last 21 days of the YOP review and comment period, provided that all changes to the YOP, as requested by the DAR are made and that each municipality receives the revised YOP and sensitive area maps prior to commencing with the spray program. In addition a public notice shall be printed in a widely circulated newspaper 48 hours prior to pesticide application. Appendix E includes reproduction of 333 CMR 10.00, Wetland Regulations pertaining to Rights-of-Way management.

9.4 – Applicators’ Compliance Guidelines

Any applicators contracted to implement the herbicide management program to the ROW shall so do in accordance with all applicable state, federal, and local by-laws and will abide by the standards set forth in this plan and the YOP. The applicator will be thoroughly familiar with the contents of the VMP and YOP and shall carry a copy of the VMP and YOP at all times while performing herbicide application on the ROW.

The herbicide applicator shall abide by the sensitive area restrictions set forth in 333 CMR 11.00. During herbicide application, a railroad spotter vehicle shall proceed ahead of the spray truck and alert the applicator of any upcoming sensitive areas.

The herbicide applicator shall not handle, mix, or load herbicide concentrate on a ROW within 100 feet of any sensitive area. Water for mixing the herbicide may be obtained, subject to local ordinances, from ponds, lakes, or streams adjacent to the ROW, provided that tanks and hoses are equipped with DEP approved anti-siphon devices to prevent backflow or herbicides into the water source. Hoses and pumps utilized for filling the dispensing tank with water shall not be used for any purpose that could result in contact of the equipment with the herbicide concentrate or solution. Herbicide concentrate shall only be added to the dispensing tank after the tank is filled with water, at a location at least 100 feet from any sensitive areas. No cleaning or rinsing of tanks, nozzles or other equipment shall be performed within 100 feet of a sensitive area. Rinse water or excess herbicide mixture shall be disposed at an approved waste disposal facility.

Mixing and use of herbicides shall be consistent with the label instructions included on the packaging. Sampling labels for herbicides and associated carriers and adjuvants shall be included as Appendices to each YOP. The herbicide applicator shall wear protective clothing and personal safety equipment when mixing, handling, loading or applying herbicides. Latex or nitrile rubber gloves as well as eye goggles should be worn during the mixing of herbicide concentrate.

10.0 EMERGENCY AND CONTINGENCY PLANNING AND RESPONSE

The herbicide applicator is experienced in the containment, cleanup, and reporting of any herbicide spills or related accidents. Application crews must carry with them at all times the following materials; a broom, shovel, heavy duty plastic bags, absorbent clay, activated charcoal, a suction system equipped with a hose adequate for picking up liquids, Material Safety Data Sheets and a list of emergency contact people and their phone numbers.

In the event of a spill, the applicator shall contain the release, as well as possible using the equipment and materials previously mentioned. Soil berms will be dug if necessary to contain the flow of the release. Absorbent materials and the suction hose will be used to pick up the released materials. Although the containment of the release is the first priority of the application crew, notification of the release to the Massachusetts Department of Environmental Protection Emergency Response Unit may be required within two (2) hours of the occurrence. Notification is dependent on the type and quantity of material released (e.g. reportable release of non-herbicide). The YOP shall include a complete list of federal, state, and local emergency contacts and telephone numbers.

Most commercial application contractors have developed guidelines of emergency procedures that must be followed by the application crew in the event of a release or related emergency. The applicators spill response and cleanup guidelines will be appended to the YOP.

In addition the Railroad has developed its own emergency response procedures to be followed in the event of any oil or hazardous materials release on Railroad property and ROW. A copy of this document is included in Appendix H and will be attached to each YOP.

11.0 ALTERNATIVE LAND USE PROVISIONS OR AGREEMENTS

The Railroad will take into consideration any requests by state or local officials and private citizens concerning protection of areas not already protected under 333 CMR 11.00. Such requests may include provisions for additional no spray setbacks for certain sensitive areas, or avoidance of vegetation removal in areas adjacent to the roadbed where vegetation may provide an aesthetic barrier between the ROW and abutting residences. Other examples may include the avoidance of herbicide applications at heavily used crossings, or near parks and recreation areas. Any such requests will be considered on a case by case basis. The requesting party must provide to the railroad evidence that:

- Herbicide applications or other means of vegetation control within the area of concern could reasonably jeopardize the welfare and/or safety of the public, or otherwise would create an unreasonable hardship to the concerned party.
- The vegetative conditions in the area of concern do not significantly interfere with railroad operations or present a safety hazard to railroad personnel or to the general public.

Any requests for special consideration should be made in writing and sent to:

Pan Am Railways, Inc.
1700 Iron Horse Park
North Billerica, Massachusetts 01862
Attention: Vegetation Control Department

12.0 QUALIFICATIONS OF PERSONS DEVELOPING THE PLAN

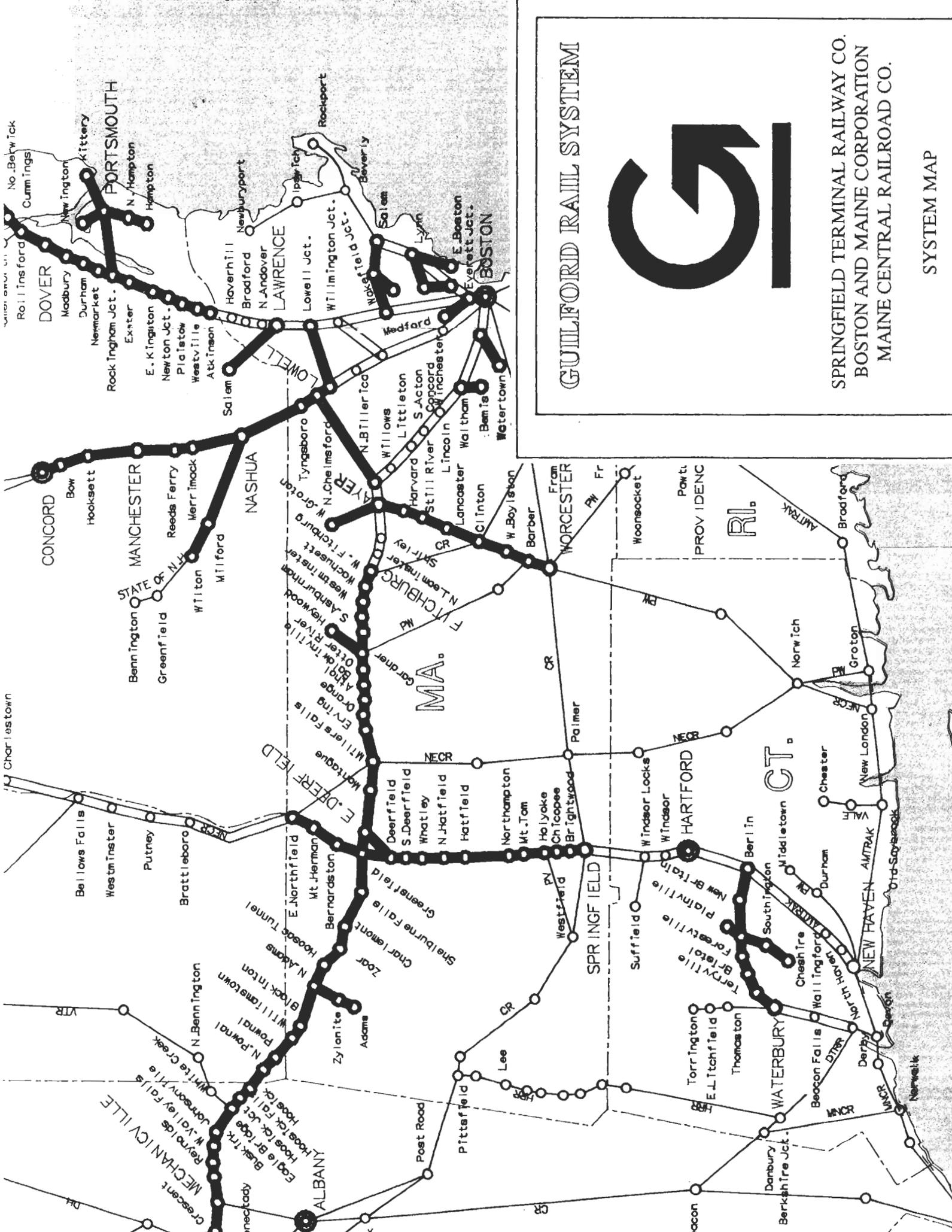
The Springfield Terminal Railway Company/Boston and Maine Corporation Vegetation Management Plan was prepared by environmental consultants Keith L. Morris and Michael F. Gragnolati of Leeds, Massachusetts and Windsor Locks, Connecticut. They were part of the team that developed the previous VMPs that were approved in July 1992, June 1999, and January 2005. Since the approval of those VMPs, they have been responsible for the preparation and administration of the YOP for the Boston and Maine Corporation. The professional resumes of the above personnel are included as Appendix I.

Railroad personnel Sharon Ziemek provided the operational methods that have been incorporated into this plan for Pan Am Railways, Inc.

Herbicide handling, application, and record keeping requirements were provided by RWC Inc., of Westfield, Massachusetts.

APPENDIX A

Track Map



GUILFORD RAIL SYSTEM

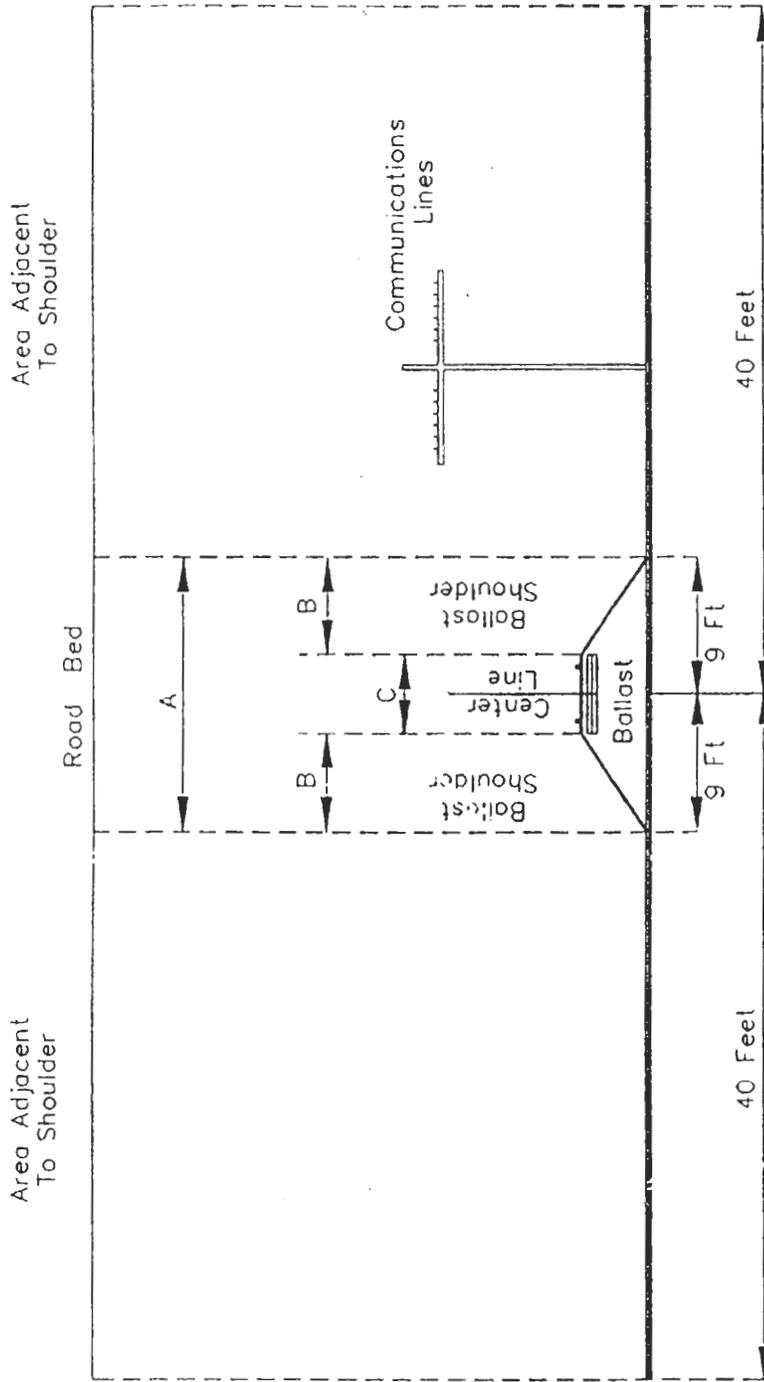


SPRINGFIELD TERMINAL RAILWAY CO.
 BOSTON AND MAINE CORPORATION
 MAINE CENTRAL RAILROAD CO.

SYSTEM MAP

APPENDIX B

Figures



Spray Pattern

A = 18 Feet

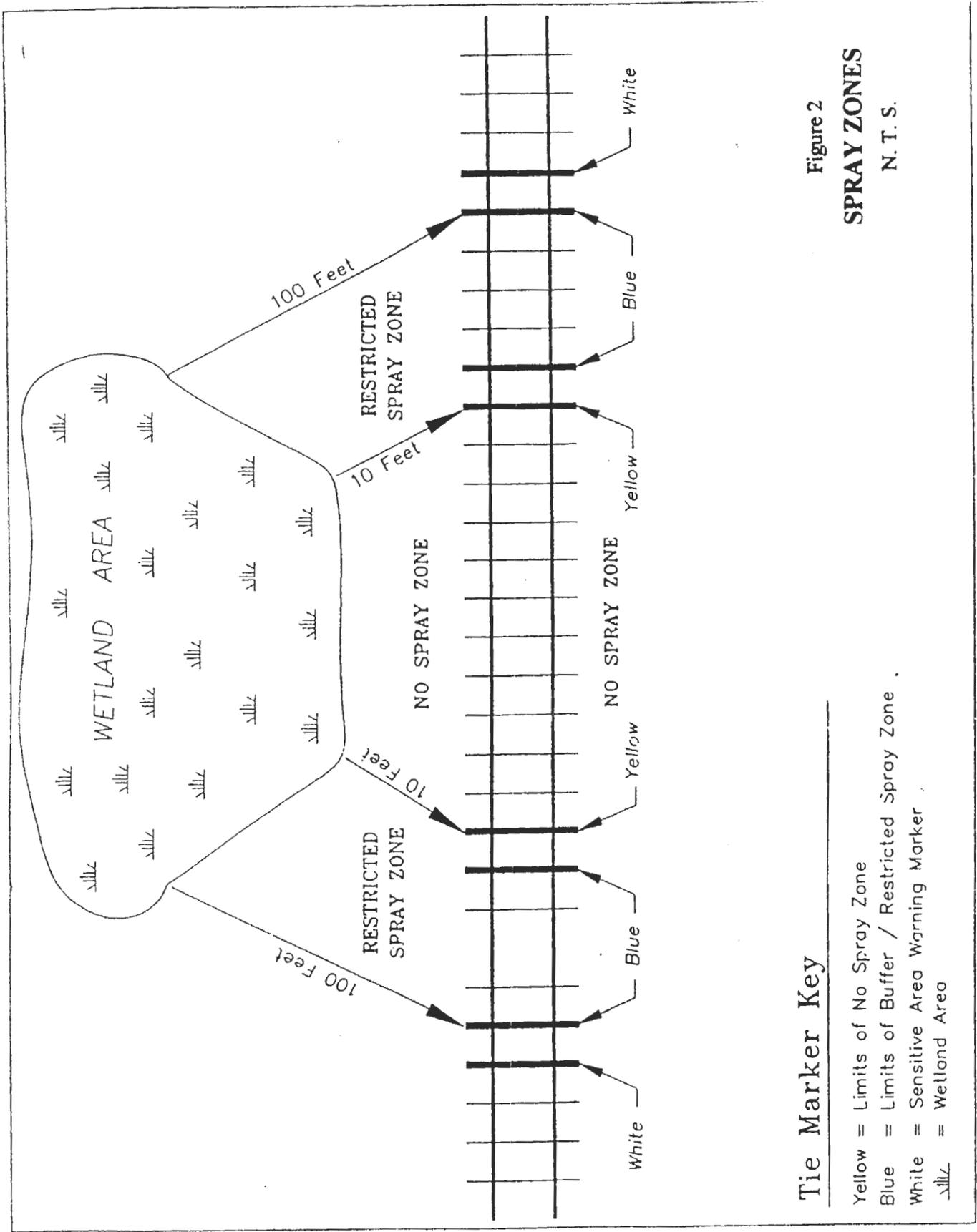
B = 6.5 Feet

C = 5 Feet

Figure 1

CROSS SECTION OF ROADBED

N. T. S.



Tie Marker Key

- Yellow = Limits of No Spray Zone
- Blue = Limits of Buffer / Restricted Spray Zone
- White = Sensitive Area Warning Marker
- Wetland Area

Figure 2
SPRAY ZONES
N. T. S.

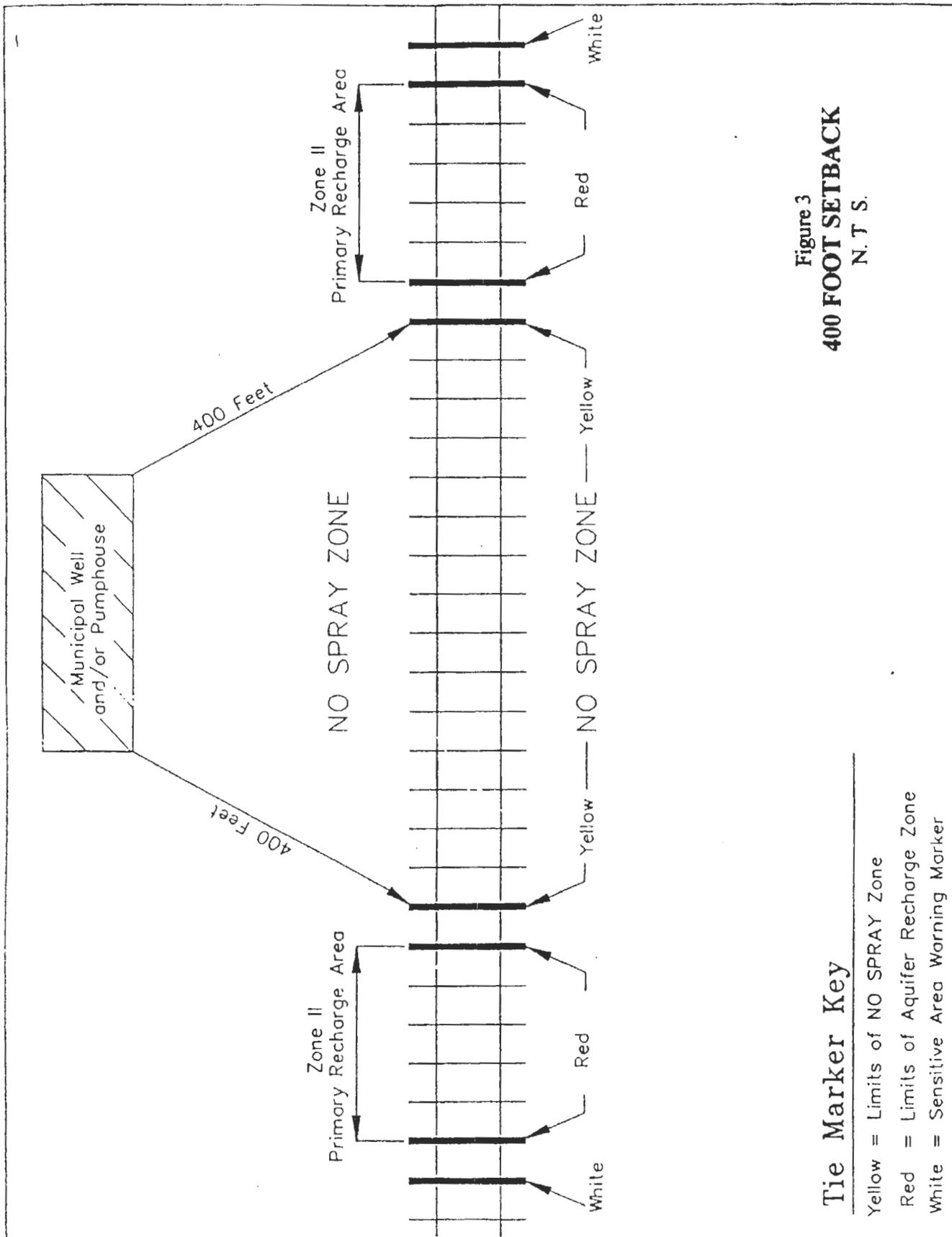


Figure 3
400 FOOT SETBACK
 N. T. S.

Tie Marker Key

- Yellow = Limits of NO SPRAY Zone
- Red = Limits of Aquifer Recharge Zone
- White = Sensitive Area Warning Marker

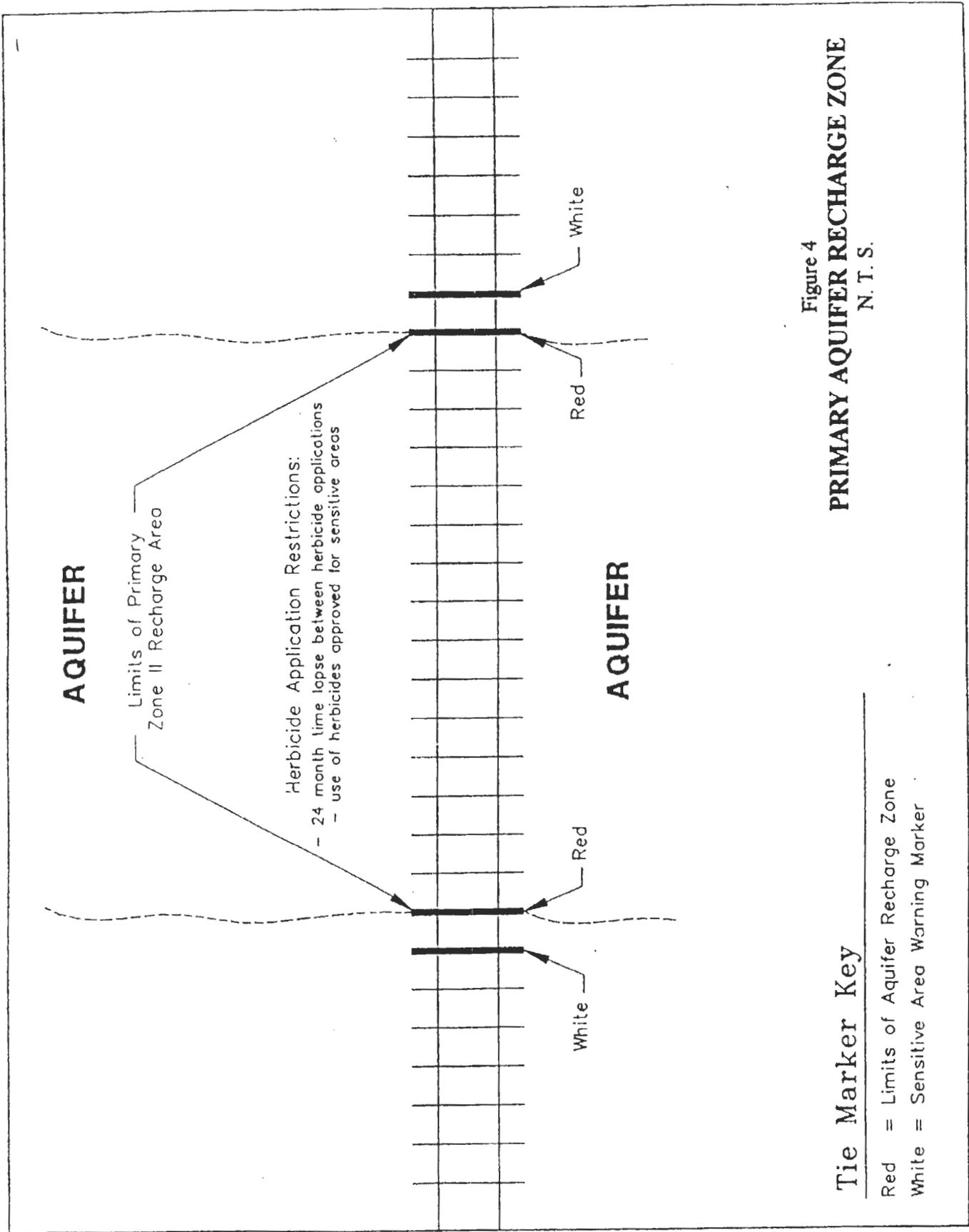


Figure 4
PRIMARY AQUIFER RECHARGE ZONE
 N. T. S.

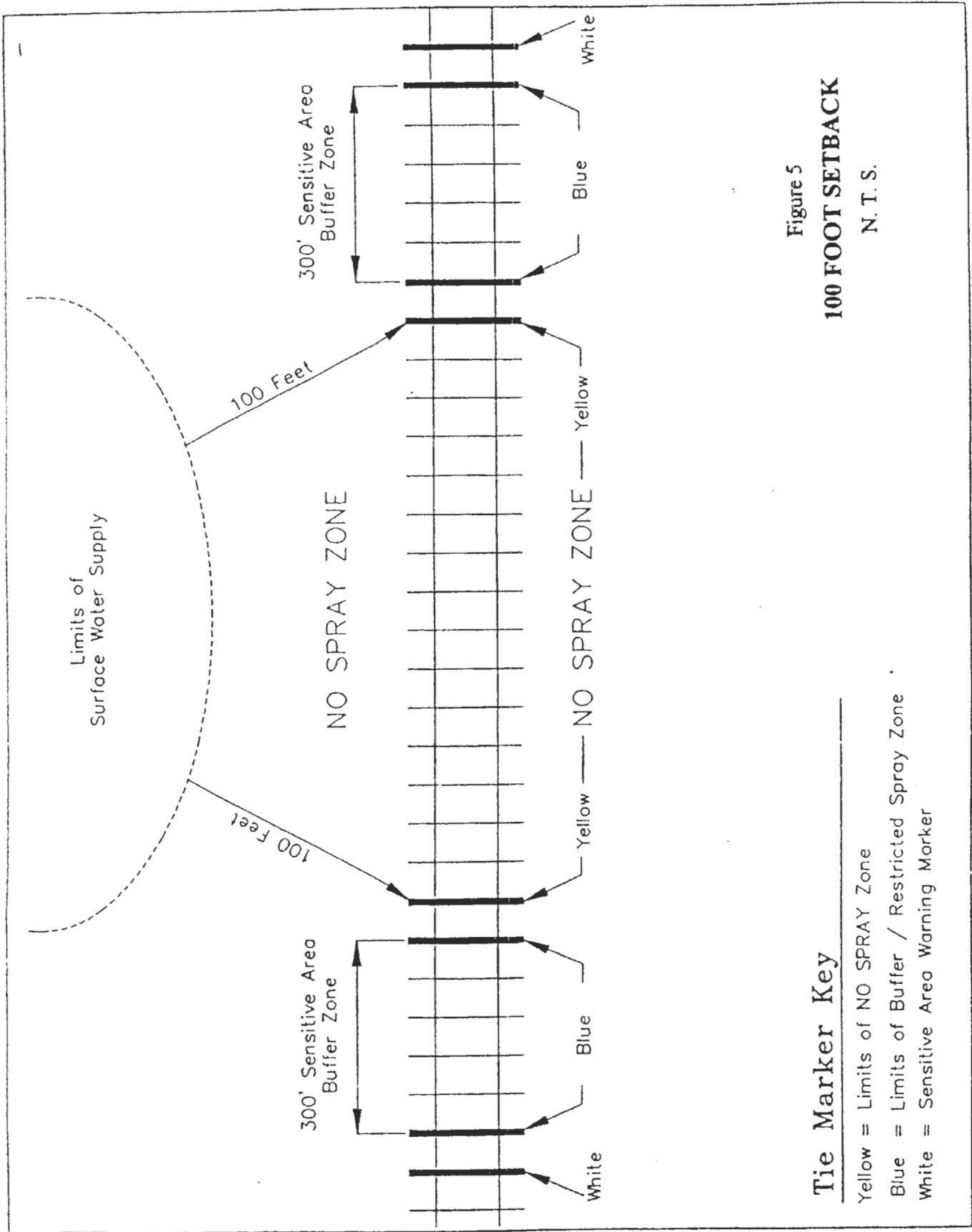


Figure 5

100 FOOT SETBACK

N. T. S.

Tie Marker Key

- Yellow = Limits of NO SPRAY ZONE
- Blue = Limits of Buffer / Restricted Spray Zone
- White = Sensitive Area Warning Marker

APPENDIX C

Sensitive Area Restriction Guide

Sensitive Area Restriction Guide (333 CMR 11.04)

Sensitive Area	No Spray Zone	Limited Use Zone	Where Identified
Wetlands and Water Over Wetlands	Within 10 feet (unless provisions of 333 CMR 11.04(4)(c) are followed)	10 – 100 feet; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps and identify on site
Certified Vernal Pool	Within 10 feet	10 feet to the outer boundary of any Certified Vernal Pool Habitat; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps and identify on site
Riverfront area	Within 10 feet of mean annual high water mark.	10 – 200 feet; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps and identify on site
Public Ground Water Supply	Within 400 feet (Zone I)	Zone II or IWPA (Primary Recharge Area); 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps
Public Surface Water Supply	Within 100 feet of any Class A public surface water source	100 feet to the outer boundary of the Zone A; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps
	Within 10 feet of any tributary or associated surface water body located outside of the Zone A	10 feet to the outer boundary of the Zone A; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	
	Within 100 feet of any tributary or associated surface water body located within the Zone A of a Class A public surface water source		

Sensitive Area	No Spray Zone	Limited Use Zone	Where Identified
	Within a lateral distance of 100 feet for 400 feet upstream of any Class B Drinking Water Intake	Within a lateral distance of between 100 - 200 feet for 400 feet upstream of intake; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	
Private Water Supply	Within 50 feet	50 – 100 feet; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	In YOP well list and identify on site
Surface Waters	Within 10 feet from mean annual high-water line	10 feet from the mean annual high water line and the outer boundary of the Riverfront Area; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps and identify on site
Agricultural and Inhabited Areas	N/A	0 – 100 feet 12 months must elapse between application; Selective low pressure, using foliar techniques or basal or cut-stump applications.	Identify on site
State-listed Species Habitat	No application within habitat area except in accordance with a Yearly Operational Plan approved in writing by the Division of Fisheries and Wildlife		YOP Maps

APPENDIX D

Request For A Determination of Applicability (Form 1)



WPA Form 1- Request for Determination of Applicability

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

A. General Information

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



1. Applicant:

Name _____		E-Mail Address _____	
Mailing Address _____			
City/Town _____		State _____	Zip Code _____
Phone Number _____		Fax Number (if applicable) _____	

2. Representative (if any):

Firm _____			
Contact Name _____		E-Mail Address _____	
Mailing Address _____			
City/Town _____		State _____	Zip Code _____
Phone Number _____		Fax Number (if applicable) _____	

B. Determinations

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

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

Name of Municipality

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



WPA Form 1- Request for Determination of Applicability

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

C. Project Description

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

Street Address

City/Town

Assessors Map/Plat Number

Parcel/Lot Number

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

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

Title

Date

Title

Date

Title

Date

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



WPA Form 1- Request for Determination of Applicability

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

C. Project Description (cont.)

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

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

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

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



WPA Form 1- Request for Determination of Applicability

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

D. Signatures and Submittal Requirements

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

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

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

Name and address of the property owner:

Name

Mailing Address

City/Town

State

Zip Code

Signatures:

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

Signature of Applicant

Date

Signature of Representative (if any)

Date

APPENDIX E

Official Wetland Boundary Determination (Form 2)



WPA Form 2 – Determination of Applicability

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

A. General Information

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



From:

Conservation Commission

To: Applicant

Property Owner (if different from applicant):

Name

Name

Mailing Address

Mailing Address

City/Town

State

Zip Code

City/Town

State

Zip Code

1. Title and Date (or Revised Date if applicable) of Final Plans and Other Documents:

Title

Date

Title

Date

Title

Date

2. Date Request Filed:

B. Determination

Pursuant to the authority of M.G.L. c. 131, § 40, the Conservation Commission considered your Request for Determination of Applicability, with its supporting documentation, and made the following Determination.

Project Description (if applicable):

Project Location:

Street Address

City/Town

Assessors Map/Plat Number

Parcel/Lot Number



WPA Form 2 – Determination of Applicability

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

B. Determination (cont.)

The following Determination(s) is/are applicable to the proposed site and/or project relative to the Wetlands Protection Act and regulations:

Positive Determination

Note: No work within the jurisdiction of the Wetlands Protection Act may proceed until a final Order of Conditions (issued following submittal of a Notice of Intent or Abbreviated Notice of Intent) or Order of Resource Area Delineation (issued following submittal of Simplified Review ANRAD) has been received from the issuing authority (i.e., Conservation Commission or the Department of Environmental Protection).

1. The area described on the referenced plan(s) is an area subject to protection under the Act. Removing, filling, dredging, or altering of the area requires the filing of a Notice of Intent.

2a. The boundary delineations of the following resource areas described on the referenced plan(s) are confirmed as accurate. Therefore, the resource area boundaries confirmed in this Determination are binding as to all decisions rendered pursuant to the Wetlands Protection Act and its regulations regarding such boundaries for as long as this Determination is valid.

2b. The boundaries of resource areas listed below are not confirmed by this Determination, regardless of whether such boundaries are contained on the plans attached to this Determination or to the Request for Determination.

3. The work described on referenced plan(s) and document(s) is within an area subject to protection under the Act and will remove, fill, dredge, or alter that area. Therefore, said work requires the filing of a Notice of Intent.

4. The work described on referenced plan(s) and document(s) is within the Buffer Zone and will alter an Area subject to protection under the Act. Therefore, said work requires the filing of a Notice of Intent or ANRAD Simplified Review (if work is limited to the Buffer Zone).

5. The area and/or work described on referenced plan(s) and document(s) is subject to review and approval by:

Name of Municipality

Pursuant to the following municipal wetland ordinance or bylaw:

Name

Ordinance or Bylaw Citation



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

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

B. Determination (cont.)

6. The following area and/or work, if any, is subject to a municipal ordinance or bylaw but not subject to the Massachusetts Wetlands Protection Act:

-
7. If a Notice of Intent is filed for the work in the Riverfront Area described on referenced plan(s) and document(s), which includes all or part of the work described in the Request, the applicant must consider the following alternatives. (Refer to the wetland regulations at 10.58(4)c. for more information about the scope of alternatives requirements):

- Alternatives limited to the lot on which the project is located.
- Alternatives limited to the lot on which the project is located, the subdivided lots, and any adjacent lots formerly or presently owned by the same owner.
- Alternatives limited to the original parcel on which the project is located, the subdivided parcels, any adjacent parcels, and any other land which can reasonably be obtained within the municipality.
- Alternatives extend to any sites which can reasonably be obtained within the appropriate region of the state.

Negative Determination

Note: No further action under the Wetlands Protection Act is required by the applicant. However, if the Department is requested to issue a Superseding Determination of Applicability, work may not proceed on this project unless the Department fails to act on such request within 35 days of the date the request is post-marked for certified mail or hand delivered to the Department. Work may then proceed at the owner's risk only upon notice to the Department and to the Conservation Commission. Requirements for requests for Superseding Determinations are listed at the end of this document.

1. The area described in the Request is not an area subject to protection under the Act or the Buffer Zone.
2. The work described in the Request is within an area subject to protection under the Act, but will not remove, fill, dredge, or alter that area. Therefore, said work does not require the filing of a Notice of Intent.
3. The work described in the Request is within the Buffer Zone, as defined in the regulations, but will not alter an Area subject to protection under the Act. Therefore, said work does not require the filing of a Notice of Intent, subject to the following conditions (if any).

-
4. The work described in the Request is not within an Area subject to protection under the Act (including the Buffer Zone). Therefore, said work does not require the filing of a Notice of Intent, unless and until said work alters an Area subject to protection under the Act.



WPA Form 2 – Determination of Applicability

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

B. Determination (cont.)

5. The area described in the Request is subject to protection under the Act. Since the work described therein meets the requirements for the following exemption, as specified in the Act and the regulations, no Notice of Intent is required:

Exempt Activity (site applicable statutory/regulatory provisions)

6. The area and/or work described in the Request is not subject to review and approval by:

Name of Municipality

Pursuant to a municipal wetlands ordinance or bylaw.

Name

Ordinance or Bylaw Citation

C. Authorization

This Determination is issued to the applicant and delivered as follows:

- by hand delivery on by certified mail, return receipt requested on

Date

Date

This Determination is valid for **three years** from the date of issuance (except Determinations for Vegetation Management Plans which are valid for the duration of the Plan). This Determination does not relieve the applicant from complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.

This Determination must be signed by a majority of the Conservation Commission. A copy must be sent to the appropriate DEP Regional Office (see <http://www.mass.gov/dep/about/region.findyour.htm>) and the property owner (if different from the applicant).

Signatures:

Date



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

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

D. Appeals

The applicant, owner, any person aggrieved by this Determination, any owner of land abutting the land upon which the proposed work is to be done, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate Department of Environmental Protection Regional Office (see <http://www.mass.gov/dep/about/region.findyour.htm>) to issue a Superseding Determination of Applicability. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and Fee Transmittal Form (see Request for Departmental Action Fee Transmittal Form) as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Determination. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant if he/she is not the appellant. The request shall state clearly and concisely the objections to the Determination which is being appealed. To the extent that the Determination is based on a municipal ordinance or bylaw and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
Request for Departmental Action Fee Transmittal Form
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Request Information

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



1. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

Project Location

Mailing Address

City/Town

State

Zip Code

2. Applicant (as shown on Notice of Intent (Form 3), Abbreviated Notice of Resource Area Delineation (Form 4A); or Request for Determination of Applicability (Form 1)):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. DEP File Number:

B. Instructions

1. When the Departmental action request is for (check one):

- Superseding Order of Conditions (\$100 for individual single family homes with associated structures; \$200 for all other projects)
- Superseding Determination of Applicability (\$100)
- Superseding Order of Resource Area Delineation (\$100)

Send this form and check or money order for the appropriate amount, payable to the *Commonwealth of Massachusetts* to:

Department of Environmental Protection
Box 4062
Boston, MA 02211



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

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

B. Instructions (cont.)

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <http://www.mass.gov/dep/about/region/findyour.htm>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

APPENDIX F

Applicator's Daily Report And Spraying Log

RWC, INC.

DAILY FIELD REPORT

RAILROAD _____ DATE _____ 20 _____ TRUCK/TRAIN NO. _____ SHEET NO. _____ OF _____

FROM STATION _____ MP _____ TO STATION _____ MP _____ MILES _____

FROM STATION _____ MP _____ TO STATION _____ MP _____ MILES _____

FROM STATION _____ MP _____ TO STATION _____ MP _____ MILES _____

FROM STATION _____ MP _____ TO STATION _____ MP _____ MILES _____

DIVISION _____ SUBDIVISIONS _____ TOTAL MILES _____

WEATHER N <input type="checkbox"/> W <input type="checkbox"/> <input type="checkbox"/> ↑ <input type="checkbox"/> ←	Wind Velocity	6	9	12	3	6	Temperature	6	9	12	3	6
	Wind Direction	6	<input type="checkbox"/>	9	<input type="checkbox"/>	12	<input type="checkbox"/>	Rain	6	9	12	3

(Indicate direction wind is blowing by arrow, wind velocity by mph, temperature by °F, rain by inches at times shown)

	Acres Sprayed	Hours Sprayed
Main Line		
Ballast		
Special		
Crossings		
Branch Lines		
Yards		
Bridges		
Off Track		
Signal Comm.		
TSF		
TOTAL		

CHEMICAL RECEIVED TODAY			
From	CHEMICAL	No. Containers	Lbs./Gals.

Company Person on Job

- _____
- _____
- _____
- _____

Railroad Person on Job

- _____
- _____

List all Cars in Train

Locomotive Number _____

Time Reported to Work _____

Time Finished Work _____

Total Hours _____

DAILY SUMMARY CHEMICALS APPLIED					
NAME	EPA ESTABLISHMENT	REGISTRATION NO.	CONCENTRATE: GALS./LBS.	RATIO TO SOLUTION/ACRE	STATE APPLIED IN

REMARKS: _____

Railroad Employee

RWC OFFICE

Spray Operator

APPENDIX G

***Pesticide Board Regulation 333 CMR 11.00 And Massachusetts Wetlands
Protection Regulations Regarding 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 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.

333 CMR: PESTICIDE BOARD

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.

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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

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.

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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.

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:

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

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 DFA 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 H

Emergency Spill Response Plan

ENVIRONMENTAL EMERGENCY RESPONSE PLAN



**SPRINGFIELD TERMINAL RAILWAY COMPANY
BOSTON & MAINE CORPORATION
MAINE CENTRAL RAILROAD COMPANY**

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Figure

Spill Notification Flow Diagram

THIS PLAN CONTAINS GUIDELINES AND PROCEDURES THAT WILL BE FOLLOWED IN THE EVENT OF A SPILL OR RELEASE OF OIL OR HAZARDOUS MATERIAL OR THE THREAT OF A SPILL OR RELEASE OF OIL OR HAZARDOUS MATERIAL BY THE SPRINGFIELD TERMINAL RAILWAY, BOSTON AND MAINE CORPORATION, MAINE CENTRAL RAILROAD COMPANY, OR BY OTHER PARTIES ON PROPERTY OWNED BY SPRINGFIELD TERMINAL RAILWAY, BOSTON AND MAINE CORPORATION, AND MAINE CENTRAL RAILROAD COMPANY.

1.0 PLAN PURPOSE AND SCOPE

This Hazardous Material and Oil Spill Procedures and Reporting Plan (the “Plan”) has been developed to provide Pan Am Railways (Pan Am) with a comprehensive plan for emergency preparedness and response in the event of a spill or release or threat of a spill or release of hazardous material or oil. The purpose of this plan is to:

- Provide guidance during emergency situations;
- Minimize hazards to human health and the environment (*e.g.*, air, soil, surface water, groundwater) from fires, explosions, or any unplanned sudden or non-sudden release of hazardous materials or oil; and
- Familiarize local emergency response personnel (*i.e.*, police, fire, and rescue departments, government agencies, and, emergency medical services) with Pan Am’s emergency response procedures.

The provisions of this Plan will be carried out immediately whenever there is a fire, explosion, or potential or actual release of hazardous materials which could threaten human health or the environment. This Plan is also intended to outline the response actions Pan Am personnel must take to minimize hazards to human health or the environment in the event of fires, explosions, or any unplanned sudden or non-sudden release of hazardous materials and oil. Pan Am employees will not engage in emergency response operations other than incipient fires or incidental releases of hazardous materials. Outside emergency responders will be contacted for emergency response services for larger spills and fires.

1.1 DEFINITIONS

To assist the reader, definitions of commonly used terms have been summarized in this section. It should be noted that definitions of terms used in this document that are not included in this section can be found in the appropriate regulation(s).

Applicable Water Quality Standards - State water quality standards adopted by the state and approved by the U.S. Environmental Protection Agency (EPA).

Coastal Waters - The waters of the United States navigable by deep draft vessels, the contiguous zone and the other waters of the United States subject to tidal influence.

FWPCS - Federal Water Pollution Control Act (Public Law 92-500).

Hazardous Material - A substance or material which because of its characteristics has been determined by the Secretary of Transportation, to be capable of posing an unreasonable risk to health, safety and property when transported in Commerce and which has been so designed 49 Code of Federal Regulations (CFR) Part 171.8.

Hazardous Substances - Any substance designated by the Administrator of the Environmental Protection Agency.

HAZARDOUS WASTE - Any material that is subject to the hazardous waste manifest requirements of the EPA specified in 40 CFR Part 262 or would be subject to those requirements absent of an interim authorization to a state number 40 CFR Part 123.

In-Land Waters - Those waters upstream from coastal waters.

Manifest - The EPA designated shipping papers mandatory for use when transporting a hazardous waste to identify the quantity, composition, origin, routing and destination of the hazardous waste from the site of generation to the point of disposal, treatment or storage.

Mechanical Removal - The use of pumps, skimmers, booms, earth moving equipment and other mechanical devices to contain the discharge of oil and hazardous substances and to recover the discharge from the water or adjoining shorelines.

Navigable Water - Coastal waters, inland waters, interstate waters, intrastate travelers for recreational or other purposes and intrastate lakes, rivers and streams from which fish, shellfish, wildlife are taken and sold in interstate commerce.

Oil - Petroleum of any kind or in any form including but not limited to, petroleum, fuel oil, sludge, oil refuse and oil mixed with waste other than dredged spoil.

Oil Spill Or Discharge - Includes, but not limited to, any accident/incidental spilling, leaking, pumping, pouring, emitting, emptying or dumping of oil onto or on any land or water.

On-Shore Facility - A facility of any kind (including, but not limited to, motor vehicles and rolling stock) located in, on or under any land within the United States other than submerged land.

Remove And Removal - Refers to removal of oil or hazardous substances from the waters and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare, including but not limited to, fish shellfish, wildlife and public and private property, shorelines and beaches.

Sheen - An iridescent appearance on the surface of the water.

Sludge - An aggregate of oil or oil and other matter of any kind in any form other than dredged spoil having a combined specific gravity equivalent to or greater than water.

Sorbent - Materials essentially inert and insoluble used to remove oil from water through a variety of sorption mechanisms. Examples include straw, expanded perlite, polyurethane foam, reclaimed paper fibers and peat moss.

Spill Event - A discharge of oil or hazardous substance into or upon the navigable waters of the United States or adjoining shorelines which:

- a. Violate applicable water quality standards or;
- b. Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge emulsion or be deposited beneath the surface of the water or upon adjoining shorelines.

Threat Of Release - Includes, but is not limited to, any incident or occurrence which results in a situation where a potential exist for a subsequent release of oil or a hazardous substance and requires action to prevent or mitigate damage to the environment.

2.0 INCIDENT RESPONSE

2.1 GENERAL PRECAUTIONS

Accident/incidents involving transportation vehicles must be evaluated and approached with great care due to the possible presence of hazardous materials. Careful, thorough evaluation, assessment and initial response to an accident/incident may make the difference between an emergency and a disaster.

It is possible that the scene of an accident/incident involving hazardous materials will present such a high degree of hazard that the only safe course is to evacuate all personnel from the area and allow the accident/incident to run its own course without intervention. Furthermore, a severe situation may exist with or without the presence of fire, smoke or fumes.

If you are first on the scene of a railroad accident/incident, your first step is to avoid endangering yourself and call for help.

2.2 DISCOVERY

In the event of all spills, fires, or other emergencies involving hazardous materials or oil, employees must take the necessary measures in accordance with applicable operating rules and special instructions to ensure the protection of the train. Once the necessary protective measures have been taken, employees are required to follow the *Spill Notification Flow Diagram* represented in **Figure 1** in the event of all spills involving hazardous materials or oil, regardless of the amount released. Contact numbers for Pan Am's Operations Center have been provided in **Attachment A** of this Plan.

Pan Am's Operations Center will contact the Environmental Manager or their alternate who will determine the proper response procedures, based on the material(s) involved, the quantity of material spilled, and the location of the incident and proximity of environmental receptors. Contact information for the Environmental Manager and their alternate has been provided in **Attachment A** of this Plan.

When reporting an accident/incident, the following information should be provided to Pan Am's Operations Center so it can be relayed to the Environmental Manager or their alternate:

1. Caller's name and telephone number;
2. Location of incident;
3. Nature of incident (*i.e.*, fire, explosion, spill, *etc.*);
4. Size and extent of emergency;
5. Materials involved;
6. Markings, labels, or placards on containers or vehicle;
7. Type of vehicle(s) or container(s) involved;

8. The overall condition of the vehicles and containers;
9. Wind direction and approximate speed;
10. Presence of injured people;
11. Presence of smoke, fire, or fumes; and
12. Presence of sensitive environmental and public receptors (*i.e.*, surface water bodies or hospitals, nursing homes, and schools).

All information must be collected from a safe distance from the accident/incident and must be gathered without jeopardizing the health and safety of employees. Personnel will isolate the scene by ensuring all unnecessary personnel are clear of the site and secure ignition sources (*i.e.*, prohibit smoking, use of flares, fuses, or open electric flashlights). Personnel have been instructed not to rush into an accident/incident site and rescue injured personnel until after the materials are identified and the nature and severity of hazard is assessed.

Train crews and facility personnel should refer to the **Department of Transportation (DOT) EMERGENCY RESPONSE GUIDE BOOK** for special instructions regarding hazardous materials, which may be involved in an accident/incident/incident situation. If safe to do so, train crews should remove the cars not directly involved by cutting the train as close to the derailed cars as safety allows, and remove them from the scene. Train crews must not take unnecessary risks.

Train crews must be readily accessible to advise emergency response personnel of potential dangers and furnish them with all emergency response information. Personnel have been instructed that waybills for hazardous materials cars involved in the accident/incident/incident must remain at the scene. **A member of the train crew will remain at the scene until properly relieved and be the liaison with emergency response personnel.**

2.3 INITIAL ASSESSMENT

Information contained in this section is intended to allow those first on the scene to make an initial assessment of the accident/incident (*i.e.*, railroad tank car tank damage) for purposes of determining what, if any, further actions should be taken.

Train crews and facility personnel must remain a safe distance upwind from the accident/incident site, paying particular attention to:

1. Location of injured personnel and their proximity to surrounding hazards;
2. Location of potentially threatened personnel;
3. Markings, labels, or placards on containers or vehicles, which may aid in identifying materials present;
4. Quantity and types of vehicles or containers involved;
5. Visible damage and/or leakage from containers or vehicles (gas, vapor, liquid, solid);

6. Vehicle reporting marks (car or truck number);
7. Accessibility to accident/incident site and possible escape routes;
8. Weather conditions; and
9. Topographical features of the accident/incident site and surrounding area (especially, but not limited to, bodies of water, drains, culverts, *etc.*).

2.3.1 Tank Car Damage Assessment

Railroad tank cars and other bulk containers involved in accident/incident may suffer severe damage without loss of lading. This damage may appear significant, but the car or container may still have sufficient reserve strength to permit it to be carefully removed from the accident/incident site for later transfer of unloading of its contents.

The most significant damage that may occur to tanks and other containers transporting compressed flammable gases is caused by denting, scoring, or gouging without a resultant leak. Time, pressure and subsequent handling may result in a rupture. If this occurs, heat caused by the metal failure may ignite the tank contents. Therefore, assessment of tank damage requires the presence of trained specialists.

2.4 RESPONSE ACTIONS

Upon being notified, the Environmental Manager or their alternate will assess the situation to determine the following:

- Hazards involved;
- Magnitude of the incident;
- Resources threatened; and
- Exclusion zone need or evacuation requirements.

Early recognition of accident/incident hazards and potential risks is essential. The initial responsibility for assessment of accident/incident hazards lies with the first responding units. On-site information gathering is limited to that which can be obtained within the limits of the first-responders' training and personal protective equipment (PPE). First-in units will gather and communicate pertinent information regarding the presence or release of hazardous materials to the Environmental Manager or their alternate. **Each responder must be alert to the signs, evidence and indications of the presence of hazardous materials during fires and other incidents and report such information.**

The following environments must be evaluated before commitment of any personnel for any reason:

1. Confined spaces (manholes, trenches, tunnels, tankers, *etc.*) that must be entered;

2. Potentially explosive or flammable situations indicated by gas generation or gas release or over pressurization of containers;
3. Presence of hazardous materials that are identified on waybills or shipping papers;
4. Visible vapor clouds; and
5. Areas where biological indicators, such as unconscious persons, dead animals or vegetation are located.

2.4.1 Procedures for Spill and/or Release of Hazardous Materials

Initial Notification Procedures

Determination of emergency procedures is the responsibility of the Environmental Manager or their alternate and has been summarized below:

1. The Environmental Manager or their alternate must identify the character, exact source, amount, and extent of any released hazardous materials or oil and assess possible hazards to human health or the environment.
2. If the Environmental Manager or their alternate determines there is a threat to human health or to the environment, he must report his findings immediately to the local authorities, especially if evacuation of local areas may be required;
3. If the Environmental Manager or their alternate determines that the spill or release exceeds a reportable quantity (RQ), then the Environmental Manager or their alternate must notify the appropriate state and/or federal agency(s). **Attachment A** contains contact information for state and federal regulatory agencies that could be contacted in the event of a spill of hazardous material or oil. The following information should be provided when notifying state and federal agencies:
 - The name and telephone number of the caller;
 - The location of the release or threat of release;
 - The date and time the release occurred;
 - The name of the oil and/or hazardous material(s) released or of which there is a threat of release;
 - The approximate quantity of the oil and/or hazardous material(s) which has been released or of which there is a threat of release;
 - The source of the release or threat of release;
 - A brief description of the release or threat of release;
 - Whether the spill has been contained, or whether the flow has stopped;
 - Any other information, such as potential impacts to human health or the environment, that is relevant to assessing the degree of hazard posed by the release or threat of release; and

- The extent of injuries, if any.

Spill Response Procedures

For all spills or leaks, the following guidelines will be followed as closely as possible by individuals specified by the Environmental Manager or their alternate.

- Chemicals may not be employed in the cleanup of a spill or discharge without approval from the appropriate regulatory agency;
- The use of sorbents will be limited to the cleanup of small spills and the final cleanup of large spills;
- Disposal of all recovered petroleum products and oil-soaked debris will be in accordance with applicable state regulations;
- Pan Am will, at all times, maintain in good repair any equipment for the prevention and control of discharges and the containment and removal thereof when a discharge occurs;
- No major alterations in the structures or equipment that would materially affect the potential for a petroleum discharge, will occur except in accordance with approved plans by the applicable regulatory agency; and
- Any contractor that may be transporting and/or disposing of hazardous waste collected as a result of a spill must be properly licensed.

Small Spills

- If the spill is small enough to be absorbed, neutralized or otherwise controlled at the time of release by employees in the immediate release area, does not pose an adverse exposure hazard to employees, and is within the scope of the employee's training, then the spill will be handled in the following manner:
 - Make sure all unnecessary persons are removed from the hazard area;
 - If flammable material is involved, remove all ignition sources, and use spark and explosion proof equipment and clothing during containment and clean up activities;
 - If possible, try to stop the leak;
 - If spilled materials are flowing from containers (*i.e.*, fuel tanks or tankers), try to stop the flow from the source. This may be accomplished by temporarily patching/plugging source or transferring material to another container;
 - Use absorbent pads, booms, earth, sandbags, sand, and other inert materials to contain, divert, neutralize and clean up spilled material if it has not been contained. Contained spills can be pumped into compatible drums or tankers. If the released material is flammable, make sure that all electrical/mechanical

equipment used during containment and clean up activities is explosion proof; and

- Place all recovered hazardous material or oil and containment and clean-up materials in compatible drums for proper disposal.

Large Spills

- Initiate evacuation of personnel as necessary;
- Contact emergency medical services (911) for any injured persons. To the extent possible, provide instructions for first aid procedures;
- Contact the local fire department (911) if a fire is involved. Keep heat exposed containers cooled with water spray and remove them from the area if possible. Note that fire emergencies generally supersede spill emergencies.
- If venting devices are activated (*i.e.*, they produce a hissing sound) or if a drum or tanker begins to bulge or discolor, withdraw from the area immediately;
- Contact the appropriate Emergency Response Contractor for emergency spill response. It should be noted that Pan Am personnel will not assist in handling hazardous materials spills, except minor spills which present limited risk to personnel and are within the scope of their training. For all other spills of hazardous materials, the Environmental Manager or their alternate will contact an Emergency Response Contractor.
- The Environmental Manager or their alternate will contact the proper local authorities, including water supply and wastewater treatment system operators, police, and fire department if necessary; and
- All spill response equipment used will be cleaned, decontaminated and returned to ready status.

The Environmental Manager or their alternate will document the incident within 15 days and begin an investigation of the incident and the effectiveness of the emergency procedures.

Chemtrec 24 Hour Response

As part of Pan Am's commitment to the environment and as required by 49 CFR 172.604, each bill of lading containing hazardous material contains a 24/7 emergency contact/response telephone number. The majority of shipments use Chemtrec for this service (800-424-9300 or 703-527-3887). For rail shipments, the emergency response number for Chemtrec is prominently displayed on the rail car containing hazardous material.

Chemtrec is a contract provider of Level 1 emergency response services and is nationally recognized for their chemical response expertise. They have trained and experienced responders, as well as access to the latest edition of the North American Emergency Response Guide

Chemtrec will provide initial emergency response instructions to any caller requesting assistance. If requested, Chemtrec will provide a copy of the product material safety data sheet (MSDS).

Chemtrec will contact Pan Am's Operations Center and provide them with information about the reported accident/incident.

2.4.2 Procedures for Fire and/or Explosion

The following precautionary measures have been developed to minimize the spreading of fire:

- Fire extinguishers are placed throughout the facility (mostly on the building columns) and are designated by red painted areas, with identifying labels;
- All employees are trained in proper reporting and evacuation procedures; and
- Emergency service is also available from all telephones.

The first priority for an employee discovering a fire should be notification, so that the chain of command is aware of the situation and the local fire department can be contacted, if needed. The person discovering a fire will leave the immediate area and contact the Front Office and provide the following information:

- Nature of the emergency;
- Location of the emergency;
- Size and extent of the emergency;
- Hazardous materials involved (if any); and
- Person(s) injured and seriousness of injury.

The Facility Primary Emergency Coordinator or their alternate will request an ambulance and contact the local hospital if personnel are injured and then assess the situation to determine the following:

- Hazards involved;
- Magnitude of the problem (specifically, whether the fire significant);
- Resources threatened; and
- Exclusion Zone needed or evacuation of plant required.

If the fire is small and contained (incipient) and does not involve hazardous materials:

- The fire department will be notified;

- At the same time, Pan Am employees *with fire extinguisher training* will extinguish the fire;
- The Facility Primary Emergency Coordinator will determine whether the building should be evacuated for smoke build-up;
- The Facility Primary Emergency Coordinator will be notified of any injuries or damage to the building; and
- The Facility Primary Emergency Coordinator will document the incident within 15 days and begin an investigation of the incident and the effectiveness of the emergency procedures.

If the fire is determined to be significant (*i.e.*, larger than incipient stage):

- The first person discovering the fire will alert personnel in the immediate area and notify the front office via telephone;
- The front office will notify the fire department and provide the name and address of the facility and the nature of the call (fire);
- All equipment will be shut down as necessary and practical;
- The employee discovering the emergency situation and beginning the evacuation will locate the Facility Primary Emergency Coordinator and provide the location and type of fire;
- The Facility Primary Emergency Coordinator will account for all employees. Names of persons present will be taken to assist the Emergency Coordinator in determining the presence of all employees. The Emergency Coordinator will report any missing employees to the first authorized emergency responder on site;
- Upon arrival of the local fire department, the Facility Primary Emergency Coordinator and employee discovering the fire will report the location and type of fire and any missing employees;
- All employees will refrain from speaking to the media until all facts are gathered and a credible report can be given; and
- After the incident is complete, the Facility Primary Emergency Coordinator will document the incident.

If the emergency involves the release of a hazardous material, while awaiting arrival of the Environmental Manager or their alternate, personnel shall commence containment activities immediately, using all available trained manpower and materials on-hand. **All containment activities will be conducted at a safe distance from the release area and will consist of only those activities described in the employee's Hazard Communication or Spill Prevention Control & Countermeasures training.**

Immediate containment of the spill will include blocking of adjacent drains, constructing dikes, *etc.*, using all available containment materials on-hand.

3.0 REPORTING REQUIREMENTS

A variety of federal, state, and local reporting requirements exist for the reporting of emergencies and chemical releases. Detailed reporting requirements are summarized in this section. **Attachment A** summarizes contact numbers.

3.1 Local Reporting Requirements

The Environmental Manager or their alternate will contact the Local Emergency Planning Committee (LEPC and/or Fire Department to determine what local spill reporting requirements exist for the locality in which the spill/release has occurred. LEPCs for each community in which Pan Am operates can be found in an USEPA database, located at www.epa.gov/ceppo/lepclist.htm. In the event on-site personnel cannot access the internet, Pan Am's Operations Center can provide the necessary information.

3.2 State Reporting Requirements

Reporting requirements vary from state to state so review of state specific regulations is critical when responding to a spill or release. State specific reporting criteria and requirements are summarized in Attachment A. Spill reporting criteria and requirements for Massachusetts have been included in the following section for use as a guideline when gathering information and reporting the spill to the appropriate state agencies.

3.2.1 Massachusetts Reporting Requirements

If a reportable quantity of Oil/Hazardous Material (OHM) listed in the Massachusetts Contingency plan (MCP) is released, the Massachusetts Department of Environmental Protection (MassDEP) requires the following action:

1. Initiation of immediate containment measures of the spill such as blocking of adjacent drains, constructing dikes, *etc.*, using all available containment materials on-hand.
2. Removal of contained materials as soon as possible and placed into proper containers. All equipment and manpower shall be utilized to remove spilled materials promptly and in a safe manner.
3. Contacting the nearest available clean-up contractor in the event that the spill is beyond the means of available manpower and materials on-hand.
4. Filing a report with MassDEP within two (2) hours of the actual or threatened release if the release is in quantities equal to or greater than any Massachusetts RQ listed, if it causes a sheen on a surface water, or poses an imminent hazard. An Imminent Hazard is defined as the presence of vapor within a building or structure at or greater than 10 percent (%) of the Lower Explosive Limit (LEL), a threat to human health, or an acute impact to fish populations. Any spill of OHM

that threatens a navigable waterway must be reported, regardless of whether the amount is less than the reportable quantity for that material.

The following information should be provided to the MassDEP, to the best of the reporting person's knowledge, when making oral notification of a spill:

1. The name and telephone number of the caller;
2. The location of the release or threat of release;
3. The date and time the release occurred;
4. The set(s) of notification criteria that is the basis for notification;
5. The name of the oil and/or hazardous material(s) released or of which there is a threat of release;
6. The approximate quantity of the oil and/or hazardous material(s) which has been released or of which there is a threat of release;
7. The source of the release or threat of release;
8. A brief description of the release or threat of release;
9. The name and telephone number of the owner/operator of the site or vessel where the release has occurred or at which there is a threat of release;
10. The name and telephone number of a contact person at the site or vessel where the release has occurred or at which there is a threat of release;
11. A description of Immediate Response Actions taken or proposed to be taken in response to the release or threat of release, as specified in 310 Code of Massachusetts Regulations (CMR) 40.0420;
12. The names of other federal, state or local government agencies that have been notified of and/or have responded to the release or threat of release; and
13. Any other information, including without limitation, potential environmental impacts, that is relevant to assessing the degree of hazard posed by the release or threat of release.

After a spill or release above the RQ for a MassDEP hazardous material (as listed in 310 CMR 40.1600), the Environmental Manager or their alternate will make written notification of the event on a Release Notification Form within 60 days. Copies of the Release Notification Form will be sent to the MassDEP Bureau of Waste Site Clean-Up Regional Office. Where appropriate, the Release Notification Form may be accompanied by a Response Action Outcome Statement.

3.3 Federal Reporting Requirements

Federal reporting requirements are summarized in this section. It is important to note that reporting varies on quantities and types of materials released, as well as the receiving media (*i.e.*, air, water, soil).

3.3.1 Clean Water Act (CWA) Requirements

Section 311(b)(5) of the Clean Water Act (CWA), codified at 40 CFR 110, establishes reporting requirements for the release of oils into navigable waters, which includes wetlands. The following releases of oil to navigable waters are reportable to the National Response Center (NRC):

1. Cause a sheen to appear on the surface;
2. Violate applicable water quality standards; or
3. Cause a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

Notification will be submitted as soon as Pan Am has knowledge of any discharge meeting any of these three thresholds in and around navigable waters. Further information about releases of oil is contained in Spill Prevention, Countermeasure, and Control (SPCC) Plans prepared for Pan Am facilities subject to the SPCC Regulations.

3.3.2 Comprehensive Environmental Response Compensation & Liability Act (CERCLA) Release Requirements

Section 104 of CERCLA (also known as "Superfund"), codified at 40 CFR 302, requires that if an amount equal to or greater than the RQ of a CERCLA hazardous substance is released into the environment over a 24 hour period, the operator must immediately notify the NRC as soon as the spill is discovered. Releases that are completely contained within a closed containment structure are not reportable. It should be noted that a release contained entirely within the building constitutes a release under CERCLA and is reportable, if more than the RQ is released to air by vents or land/water by cracks in the floor.

The Emergency Coordinator maintains a list of CERCLA hazardous substances and their respective RQs. Under 40 CFR 355.40, releases of CERCLA hazardous substances or Extremely Hazardous Substances (EHS) must be immediately reported to the NRC, the applicable state environmental regulatory agency, and the LEPC if the:

- Release has the potential to affect persons beyond the facility boundaries;
- Amount released is equal to or exceeds the hazardous substance or extremely hazardous substance's RQ; and
- RQ value is met or exceeded within any 24-hour period.

The following information, to the extent known, will be provided by the Environmental Manager or their alternate:

1. The chemical name or identity of the substance released;
2. Whether the substance is an EHS;
3. The quantity released;
4. The time and duration of the release;
5. The medium or media into which the release occurred;
6. Any relevant medical information (health risks, *etc.*);
7. Precautions to take, including evacuation; and
8. The name and telephone number of the person to contact for further information.

As soon as practical after reporting the release, the Environmental Manager or their alternate will submit a written report of the incident and information listed above which additionally includes the following information:

1. Actions taken to respond to and contain the release;
2. Any acute and chronic health effects from the release; and
3. Any advice regarding medical attention necessary for exposed individuals.

It should be noted that exemptions to this reporting requirement are provided under paragraph 355.40(a)(2) and should be carefully reviewed to determine if reporting is required.

3.3.3 Hazardous Materials Transportation Act (HMTA) Notification

Under 49 CFR 171.15, if a release of hazardous materials occurs during transport (including loading or unloading) that causes injury or death, property damage over \$50,000, public evacuation, major road closure lasting more than 1 hour, aircraft re-routing, spillage or fire of a radioactive or etiologic material, or continuing danger of life at the scene of the incident exists, then Pan Am must notify the DOT via the NRC. Each notice must include the following information:

1. Name of reporter;
2. Name and address of carrier;
3. Phone number where reporter can be reached;
4. Date, time and location of incident;
5. The extent of injuries, if any;
6. Type and quantity of materials involved; and
7. Type of incident and whether a continuing danger to life exists at the scene.

Pan Am must also submit a written report regarding the incident within 30 days, and if any unintentional release of hazardous material occurs (under conditions not necessarily listed above), a written report must be submitted.

4.0 AMENDMENTS TO THE PLAN

Periodically, Pan Am will review the Plan. The plan will be immediately amended as necessary, whenever:

- The facility license is revised;
- The plan fails in an emergency;
- Changes in *KEY* personnel;
- The list of emergency equipment changes;
- The facility makes changes in its design, construction, operation, maintenance, or security systems which would increase the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or which changes the response necessary in an emergency; or
- There occurs any other circumstance which indicates the need for a change in the Plan.

If changes are made in the Plan, updated copies will be distributed to appropriate personnel.

5.0 EMERGENCY EQUIPMENT

5.1 Building Design - Spill Containment Measures

Certain design considerations (*i.e.*, containment berms) were incorporated into the buildings intended to house large amounts of liquid products located at Pan Am facilities to reduce the likelihood of spills reaching the environment. The following sections describe those measures as they relate to specific operations conducted at Pan Am facilities.

It should be noted that all internal floor drains located within the facilities that were directed to storm water have been sealed. Therefore, material that is released within the confines of the building is not likely to impact the environment. However, Pan Am facilities may be equipped with floor drains (Engine House, Work Equipment, *etc.*) that have not been plugged and are directed to the on-site waste water treatment plants. Dye tests have been conducted to verify the actual discharge location.

5.2 Hazardous Waste Storage

Hazardous waste generated at Pan Am facilities is stored in designated Hazardous Waste Storage Buildings. The maximum amount of material which can be stored in the Hazardous Waste Storage Buildings is approximately 25-55 gallon drums (equivalent to 1,375 gallons), as the building is designed to contain spills up to that amount. Incompatible materials are separated within each building.

5.3 Flammable Storage

Flammable liquids are stored in flammable storage sheds located at each facility facility. Each one of the sheds was pre-manufactured to meet stringent fire codes and is designed and constructed to contain spilled liquid in the event of a release.

5.4 Chemical Storage in Drums

Other materials commonly used in the facility are stored in DOT approved containers. The capacities of the containers are generally between 5-55 gallons. Chemicals used in the facility include, but is not specifically limited to, various grades of oil used in the compressors and equipment, water treatment chemicals, and solvents used in cleaning and production operations.

Chemicals are stored so as to minimize spills and releases. Chemicals are stored such that spills will not generally reach the environment (*i.e.*, containers are stored inside buildings on impervious floors, away from doors and drains, *etc.*). In addition, various spill control and containment methods or combinations of measures are often used to reduce the likelihood of releases (*i.e.*, drip pans, absorbents, containment pallets, *etc.*).

A complete list of oil storage locations, type of oil, equipment capacities, and spill control measures is contained in the SPCC Plan. A copy of the plan is located at the identified facility and at the Environmental Office.

Various lubricating and motor oils used in the air compressor and associated equipment are stored in the compressor room. No more than 450 gallons of oil and oil containing waste (including that which is in the equipment) are stored at anyone time in the room. All oil is stored in DOT approved containers ranging in size from 5-55 gallons. The compressor room was designed and constructed to contain spills up to 1,350 gallons (18' x 24' x 5 ½"), in the event of a spill.

5.5 Satellite Accumulation Areas

There are numerous hazardous waste satellite accumulation areas and one area designated for hazardous waste storage at each facility. Hazardous wastes generated from facility operations may be stored in satellite areas until the drum is full. When drums located in the satellite accumulation areas are full, they are removed from their respective area and transported to the accumulation area located in the Hazardous Waste Storage Building. Hazardous waste stored in the satellite and accumulation areas are managed in accordance with Massachusetts Hazardous Waste Regulations (310 CMR 30.000).

5.6 Spill Response Equipment

The following sections list equipment available to facility personnel in the event of an emergency situation. Each of Pan Am's facilities is equipped with several spill control kits, and each kit contains the following equipment/material:

- Absorbent Pads;
- Absorbent Booms/Socks;
- Duct Tape;
- 55 gallons drums;
- Plastic Bags;
- Pallets of Spill Absorbent Material (*i.e.*, Speedi-Dri) at various locations in each facility; and
- Brooms, Mops, Buckets, Shovels, Squee-gees, etc.

Each Spill kit has enough material to handle a small to medium sized petroleum spill (generally defined as 55 gallons or less). Pan Am personnel would respond defensively to any large releases (*i.e.*, provide temporarily containment measures), but outside assistance would be called to perform response activities.

In addition to the equipment and material listed above, Pan Am owns and operates heavy equipment that can be used in the event of a spill or release. It should be noted that the equipment listed below, while assigned to a particular yard, may be located at any point on the system.

EAST DEERFIELD, MA:	250-Ton Wreck Crane 2 #583 Side Boom Bulldozer Wheel Change Boom Truck Road Tractor with Flat Trailer and Low Bed Equipment Trailer
LAWRENCE, MA:	Mobile Wreck Train (Garaged in Billerica, MA) Wheel Change Boom Truck
DOVER:	Road Tractor with Flat Trailer and Low Bed Equipment Trailer
RIGBY:	Wheel Change Boom Truck
WATERVILLE:	200-Ton Wreck Crane Mobile Wreck Crane Wheel Change Boom Truck Road Tractor with Step Deck Flat Trailer

5.7 Personal Protective Equipment

Pan Am stores PPE in each of their facilities. The majority of the emergency response equipment, including PPE, is contained in the Stores or Bridge and Building Departments but may be found in other locations at each facility. Pan Am stocks the following PPE for use by personnel during normal operations or in the event of an emergency situation:

- Chemical Resistant Clothing – Tyvek and/or Polycoated Tyvek suits;
- Hand Protection - gloves (i.e., work, chemical handling, heat resistant, cold resistant). Various types of gloves are supplied, including natural rubber, butyl, and neoprene;
- Head and Eye Protection - safety glasses, goggles, face shields, and hard hats;
- Foot Protection – safety shoes/boots and chemical resistant boots;
- Miscellaneous - aprons, arm protection, wet weather gear, cold weather gear, and heat resistant clothing.

5.8 Communications Equipment And Alarms

Telephones are located throughout Pan Am facilities, as well as near areas that contain hazardous materials. A list of emergency telephone numbers and a map showing the location of emergency response equipment is posted near the telephones located in hazardous waste storage areas.

Emergency response personnel have been issued cellular phones, beepers, and two-way radios. Additional two-way radio equipment is available for key personnel.

5.9 Fire Control Equipment

The following fire fighting equipment is available and could be used in an emergency situation:

- Fire extinguishers are located throughout both plants. This equipment is to be used only by trained personnel. Locations of fire extinguishers are denoted on the respective Facility Plans.
 - ABC;
 - CO₂; and
 - Dry Chemical
- Fire Hydrants; and
- Fire Hoses.

It is the responsibility of the Primary Facility Emergency Coordinator or their designated representative to periodically test communication and fire control equipment, and to ensure that all PPE, spill response, and first aid equipment is available and usable. Fire extinguishers are checked monthly for proper working order. Documentation is maintained at the respective facility.

6.0 COORDINATION AGREEMENTS

Title 40 of the Code of Federal Regulations, Section 264.52(c) and 310 CMR 30.521(5) of the Massachusetts Hazardous Waste Regulations requires arrangements be agreed to by local police and fire departments, local board of health, hospitals, contractors, and state and local emergency response teams.

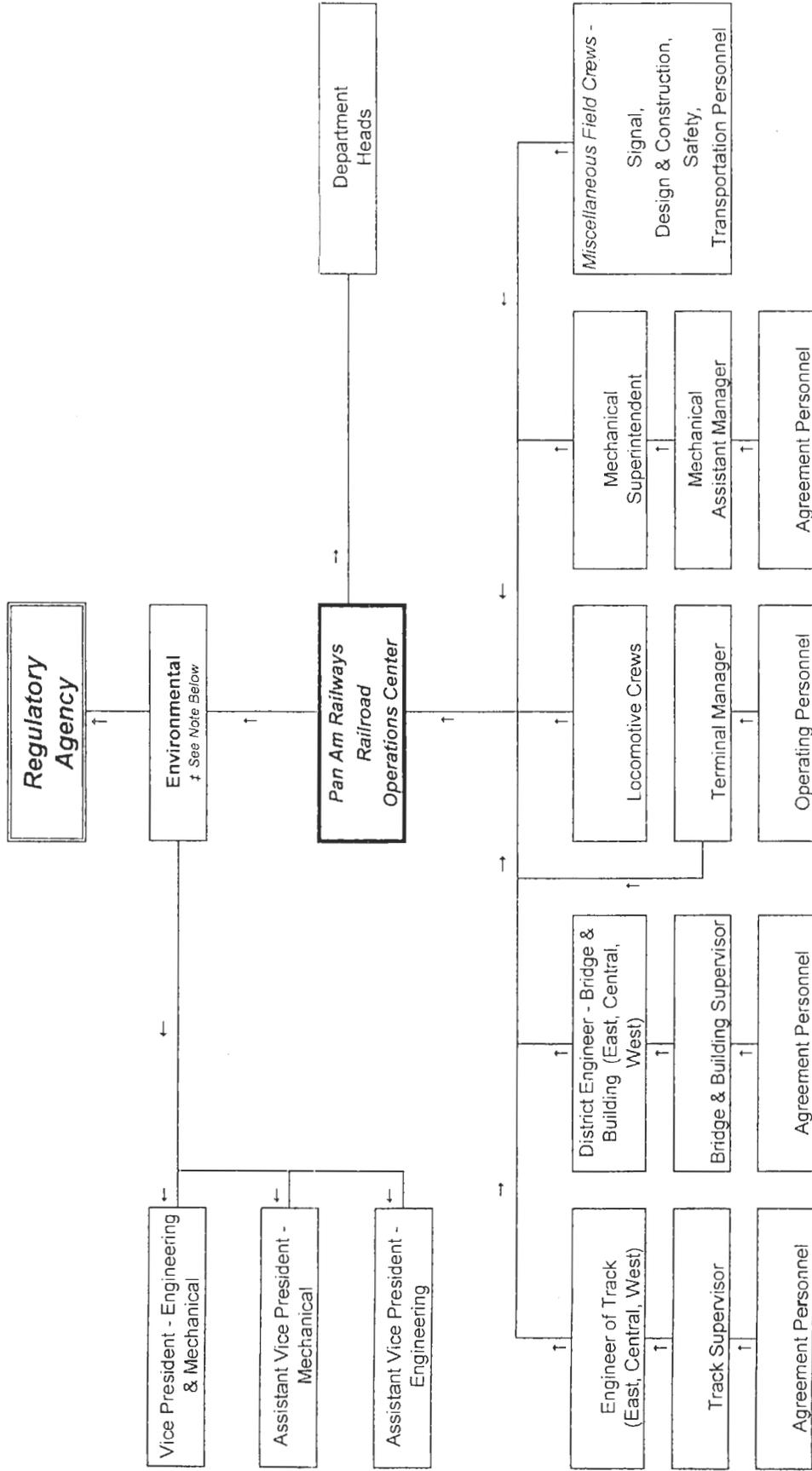
Emergency response agreements have been made with Cyn Environmental Services, Western MA Environmental Services, and ENPRO Services, Inc. to provide Emergency clean up services to Pan Am. These emergency responders are able to respond within two (2) hours in order to assist in an emergency situation. **Attachment A** contains a list of emergency contacts, addresses, and telephone numbers.

NOTIFICATION MATRIX

To ensure the proper agencies are notified in a timely fashion, notification has been assigned to the following personnel:

	<u>Notifying Party:</u>
Local Fire Department	Primary Facility Emergency Coordinator
Emergency Contact Number/Chemtrec	Primary Facility Emergency Coordinator
State Environmental Agency	Environmental Manager
EPA	Environmental Manager
US Coast Guard (USCG)	Environmental Manager
NRC	Environmental Manager
Canadian Department of Environmental	Environmental Manager
Emergency Response Contractor	Environmental Manager or Primary Facility Emergency Coordinator
Environmental Consultant (<i>i.e.</i> , LSP, LEP, <i>etc.</i>)	Environmental Manager

Spill Notification Flow Diagram



Note:
 † - Notification of reportable release or threat of release to be performed by Environmental personnel.
 ↑ - ↓ - Arrows show the flow of information

ATTACHMENT A

Pan Am Railways

Contact List

24-Hour Spill Reporting Number (Oil or Hazardous Material)

Immediately notify Pan Am's Operations Center in North Billerica, MA using the following toll free number:

1-800-955-9208

Provide the following information, to the extent possible:

1. The location of the release/threat of release;
2. The correct shipping name, placard number if placarded, with Standard Transportation Commodity Classification (STCC) Code if hazardous material;
3. Petroleum products, although not considered by Department of Transportation (DOT) to be hazardous material, must also be reported.
4. If release occurred, the quantity of spill by best estimate;
5. Approximate distance to nearest stream, swamp or body of water;
6. Can released material reach such stream, swamp or body of water; and
7. If release/threat of release is associated with train derailment, provide the following:
 - Car number of all cars involved in derailment containing hazardous materials or petroleum products;
 - Correct shipping name, placard number if placarded, with STCC Code for all hazardous material cars involved in derailment and their status (leaking or not leaking);
 - Give quantities as best can estimate of various items released;
 - Give numbers of cars in train containing hazardous materials even though they are not involved in derailment. Correct shipping name, placard number if placarded, with STCC Code should be indicated with car number; and
 - If fire involved, what is the distance to all hazardous material cars and shipping name of the commodity contained therein.

Upon receipt of notification at North Billerica that a release/threat of release of oil or hazardous material or polluting discharge has occurred, the following procedure will be followed:

Pan Am Rail System Personnel

1. Pan Am's Operations Center will provide the Environmental Manager or their alternate with the information received. The Environmental Manager or their alternate will make a determination which regulatory agencies need to be contacted and by whom.

Environmental

Manager

Dana Banks

Cell: (978) 302-6140
Office: (978) 663-1218
Home: (603) 622-0923

2. If the release/threat of release involves a train, determine if there are any cars in the train containing a hazardous material, whether involved in the derailment or not;
3. If instructed to do so, notify the Local Fire Department;
4. If instructed, contact the emergency contact number on the waybill or Chemtrec at (800) 424-9300.
5. Notify the Safety Department:

Executive Director of Safety & Training

David Nagy

Pager: (978) 638-8520
Cell: (603) 767-8605
Office: (978) 663-9346
Home: (603) 742-0759

6. Notify Bridge & Building Supervisor for the District involved
 - For spills in the West District, which extends from Fitchburg Station to Rotterdam Junction including track in Connecticut:

David Cary, East Deerfield, MA

Pager: (413) 290-7195
Cell: (978) 793-1018
Office: (413) 774-6166
Home: (413) 665-8418

- For spills in the Central District, extends from all tracks from the west end of Rigby Yard to Fitchburg Station including the Worcester, Nashua, and Portland Line (WN&P).

Michael Davis, North Billerica, MA

Pager: (978) 316-4852
Cell: (978) 793-1013
Office: (978) 663-6958
Home: (603) 692-3737

- For spills in the East District, extends from Mattawamkeag, ME to Portland, ME and covers all tracks.

Ken Pelletier, Waterville, ME

Pager: (207) 264-1987
Cell: (978) 257-1745
Office: (207) 873-6961
Home: (207) 453-9423

Independent Environmental Consultant and Contractors

The Environmental Manager will determine if outside assistance is required and contact as appropriate. Contact numbers have been provided for those vendors with whom emergency response contracts have been established.

PRIMARY ENVIRONMENTAL CONSULTANT

Environmental Resource Management

John Drobinski, LSP

Cell: (617) 833-3583
Office: (617) 646-7850
Home: (978) 443-3526

PRIMARY ENVIRONMENTAL CONTRACTOR

ENPRO Services, Inc

(800) 966-1102 – 24 Hour Response (MA)
(888) 795-1400 – 24 Hour Response (ME)

ALTERNATE ENVIRONMENTAL CONTRACTORS

Cyn Environmental Services

(800) 242-5818 - MA Only
(800) 622-6365 -- Outside MA

Western MA Environmental Services

(866) 662-2622
(413) 562-2622
(413) 315-0657

Massachusetts Department of Environmental Protection (MassDEP) Contact List

24-Hour Spill Reporting Statewide Number (Oil or Hazardous Material)

As soon as you have knowledge of a release of oil or hazardous materials to the environment, the Environmental Manager or their alternate will notify the Local Fire Department and the Emergency Response section of the Massachusetts Department of Environmental Protection (MassDEP) at:

(617) 556-1133 in the Boston Area or (888) 304-1133 (Toll-Free)

Regional Office Contact Information

Regional Offices can be contacted at the following:

Massachusetts Department of Environmental Protection
Northeast Regional Office
One Winter Street
Boston, Massachusetts 02108
Phone (617) 654-6500

Massachusetts Department of Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347
Phone (508) 946-2700 Fax (508) 947-6557

Massachusetts Department of Environmental Protection
Central Regional Office
627 Main Street
Worcester, Massachusetts 01608
Phone (508) 792-7650 Fax: (508) 792-7621

Massachusetts Department of Environmental Protection
Western Regional Office
436 Dwight Street
Springfield, MA 01103
Phone (413) 784-1100 Fax: (413) 784-1149

Massachusetts Department of Environmental Protection

Response and Reporting Requirements

If a listed Massachusetts Oil/Hazardous Material (OHM) is released, MassDEP requires:

1. Immediate containment of the spill shall be initiated such as blocking of adjacent drains, constructing dikes, etc., using all available containment materials on-hand.
2. Contained materials shall be removed as soon as possible and placed into proper containers. All equipment and manpower shall be utilized to remove spilled materials promptly and in a safe manner.
3. In the event that the spill is beyond the means of available manpower and materials on-hand, the Environmental Manager or their alternate will contact the primary and/or alternate environmental contractors.
4. Releases in quantities equal to or greater than the Massachusetts reportable quantity (RQ), that causes a sheen on a surface water, or poses an imminent hazard will be reported to MassDEP within two (2) hours of the actual or threaten release. An Imminent Hazard is defined as the presence of vapor within a building or structure at or greater than 10 percent (%) of the Lower Explosive Limit (LEL), a threat to human health, or an acute impact to fish populations. Any spill of OHM that threatens a navigable waterway must be reported, regardless of whether the amount is less than the reportable quantity for that material.

The following information should be provided to the MassDEP, to the best of the reporting person's knowledge, when making oral notification of a spill:

1. The name and telephone number of the caller;
2. The location of the release or threat of release;
3. The date and time the release occurred;
4. The set(s) of notification criteria that is the basis for notification;
5. The name of the oil and/or hazardous material(s) released or of which there is a threat of release;
6. The approximate quantity of the oil and/or hazardous material(s) which has been released or of which there is a threat of release;
7. The source of the release or threat of release;
8. A brief description of the release or threat of release;
9. The name and telephone number of the owner/operator of the site or vessel where the release has occurred or at which there is a threat of release;
10. The name and telephone number of a contact person at the site or vessel where the release has occurred or at which there is a threat of release;

11. A description of Immediate Response Actions taken or proposed to be taken in response to the release or threat of release, as specified in 310 Code of Massachusetts Regulations (CMR) 40.0420;
12. The names of other federal, state or local government agencies that have been notified of and/or have responded to the release or threat of release; and
13. Any other information, including without limitation, potential environmental impacts, that is relevant to assessing the degree of hazard posed by the release or threat of release.

After a spill or release above the RQ for a MassDEP hazardous material (as listed in 310 CMR 40.1600), the Environmental Manager will make written notification of the event on a Release Notification Form within 60 days. Copies of the Release Notification Form will be sent to the MassDEP Bureau of Waste Site Clean-Up Regional Office. Where appropriate, the Release Notification Form may be accompanied by a Response Action Outcome Statement.

APPENDIX I

Resumes of Persons Preparing The Vegetation Management Plan

KEITH L. MORRIS
ENVIRONMENTAL CONSULTANT
622 Spring Street
Leeds, Massachusetts 01053
Tel/Fax 413 584-0633
Email: keithlmorris@comcast.net

PROFESSIONAL EXPERIENCE

Private Consultant, January 1996 to present
Principal

Agent, Town of Suffield Conservation Commission, April 1991 to July 2002, July 2008 to present

- Technical review of proposed applications for potential wetland impacts, alternatives, and possible mitigating measures.
- Administrative review of all applications for completeness and compliance with the Town of Suffield's Wetland Regulations.
- Technical input at all Commission meetings for each application.
- Advising the Commission on procedural requirements in complying with the State of Connecticut Inland Wetlands and Water Courses Act.
- Conduct site inspections of all ongoing projects for compliance with soil and erosion control regulations and permit conditions.

Environmental Compliance Services, Inc., March 1989 to December 1995

Project Manager/Wetlands Specialist

- Responsible for division marketing, cost estimates, and direct project management of all aspects of wetlands investigations.
- Conduct federal and state wetland permitting and boundary determinations.
- Responsible for preparation of technical reports and communication with federal, state, and local authorities.
- Design and implication of wetland replacement and restoration areas, including on-site coordination and supervision.
- Filing of Notices of Intent with local conservation commissions for both private and commercial properties, including single-family subdivisions, gas stations, bridge repair work, etc.
- Client representation at public hearings and site inspections with local conservation commissions and state personnel.
- Provide ongoing consulting services to local cities and towns, including file review, site inspections, recommendations, etc.
- Conduct vegetative inventories, flood plain assessments, and wildlife habitat evaluations.
- Utilization of the SCS TR-55 Macrocomputer program for stormwater drainage calculations.
- Preparation of Environmental Notification Forms and input on Environmental Impact Statements in Accordance with the Massachusetts Environmental Policy Act.
- Compliance with Massachusetts Contingency Plan Chapter 21E, including environmental site assessments and remediation.

KEITH L. MORRIS
Environmental Consultant

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Associated Environmental Scientists, Inc., April 1984 to March 1989

- Preparation and filing of various forms and reports in compliance with federal, state, and local wetland regulations.
- Flood plain management and assessment, client representation at public meetings, and supervision of technical staff.
- Massachusetts and federal wetland boundary delineation.
- Other responsibilities included design of erosion control measures, drainage analysis, conducting topographic surveys, and project management.
- Conducted air sampling and testing for various private and commercial clients.
- Participated in projects involving compliance with Massachusetts "Right To Know" regulations, including review of Product Material Safety Data Sheets (MSDS).

EDUCATION

University of Massachusetts
B.S. in Environmental Science, 1984
Holyoke Community College
A. S. in Environmental Science, 1982

GRADUATE STUDIES

University of Massachusetts, Department of Plant and Soil Sciences
"Wetland Identification and Delineation Course"

PROFESSIONAL SOCIETY MEMBERSHIP

Society of Wetland Scientists
Soil and Water Conservation Society

PROFESSIONAL ACTIVITIES

40 OSHA Training, updated March, 1995
Erosion and Sediment Control Site Plan Workshop, October 1994
Short course on the Environmental Impact Review Process in Massachusetts, 1990

References available upon request.

MICHAEL F. GRAGNOLATI
Registered Professional Soil Scientist

PO Box 3127
45 North Street
Windsor Locks, Connecticut 06096
Tel/Fax 860-623-2588

PROFESSIONAL EXPERIENCE

Private Consultant; January 1996 to Present
Principal

Environmental Compliance Services, Inc.; April 1990 to December 1995
Senior Project Manager/Soil Scientist

- Responsible for cost estimates, marketing, proposal generation, and direct project management for all aspects of wetland investigations, wetland remediation and mitigation, and construction projects that involve wetland resource areas.
- Conducted Limited site and remedial investigations pursuant to the Connecticut Transfer Act and Massachusetts General Laws, Chapter 21-E
- Performs wetland delineations by state and federal methods, vegetative analysis, wildlife habitat evaluation and general ecological assessments for the private and public sectors.
- Conducts hydrologic assessments utilizing (USDA-SCS) TR-55 computer programs.
- Representation of clients and proposals at public meetings and site visits with governmental agencies and their representatives.
- Design and implementation of wetland replacement and restoration areas, including on-site coordination and supervision.
- Provides technical assistance in soil related matters.
- Provides detailed soils investigations of projects that range from hazardous waste sites to proposed building sites.
- Performs order 1 soils mapping.

Town of Windsor Locks Inland Wetlands and Watercourses Agency; November 1988 to present

- Responsible for technical review of proposed projects submitted to the agency.
- Provides technical input to the commission and applicants.
- Field check of work done by applicant's environmental consultants.
- Inspections of on-going construction sites for compliance with erosion and sedimentation regulations and provisions of permits.

Land Planning Consultants, Inc.; March 1989 to April 1990

Environmental Analyst/Soil Scientist

Assoc. Environmental Scientists and Engineers, Inc.; June 1988 to Mar. 1989

Senior Soil Scientist

- Project manager of up to 20 concurrent projects with the supervision of 5 multi-disciplined professionals.
- Conducted limited site investigations and remedial investigations pursuant to the Massachusetts Contingency Plan and Massachusetts General Laws, Chapter 21-E and the Connecticut Transfer Act.
- Performed wetland delineations using state and federal regulations.
- Performed vegetative analysis, wildlife habitat evaluations, and general ecological assessments for the private and public sectors.
- Designed and implemented wetland replacement and restoration plans.
- Prepared and presented oral and written technical reports before local, state and federal agencies.

Hampden and Hampshire, Massachusetts Conservation Districts;

January 1985 to June 1988

Soil Survey Party Member/Soil Scientist

- Worked in cooperation with the United States Department of Agriculture (Soil Conservation Service) in the preparation of the “Soil Survey of Hampshire and Hampden Counties, Massachusetts (Western Part)”.
- Responsible for approximately 100,000 acres of order 2 and 3 soils mapping.
- Provided technical assistance to local municipalities, state and federal agencies and the public sector.
- Responsible for the development of technical reports, descriptive legends and interpretive tables.
- Participated in the Environmental Protection Agencies 1987-1988 acid rain study.
- Conducted workshops in soil survey manuals and soil suitability for on-site septic system for Franklin County and the Massachusetts Department of Environmental Quality Engineers.
- Letter of Commendation for exceptional performance, US Department of Agriculture, December 1987.

University of Connecticut, Department of Plant Sciences; June 1982 to January 1985

Research Assistant

- Worked under multi-year grant from the “National Cooperative Soil Survey”.
- Performed experimental design and personnel management for environmental research projects.
- Coordinated field sampling and laboratory analysis of selected soils through Connecticut.
- Conducted extensive literature reviews in many facets of soil science, geology, and the life sciences.
- Teaching and laboratory assistant for introductory and advanced soil science courses.

EDUCATION

University of Connecticut, Storrs
BS Agronomy, cum laude, 1982

GRADUATE STUDIES

University of Connecticut, Storrs

Thesis: “The Characterization of Two (2) Well Drained Connecticut Soils and their Relationship to the Regional Till Stratigraphy”

Completed course work for MS in Soil Science

PROFESSIONAL SOCIETY MEMBERSHIP

Society of Soil Scientists of Southern New England

Society of Wetland Scientists

Alpha Zeta

PUBLICATIONS

Luce, H.D. and Gragnolati, M.F., “Characterization of Two Well Drained Till Soils in Connecticut”, Proceedings of Northeast Branch American Society of Agronomy, Laval University, Quebec, Canada, 1984.