Town of Milford, Massachusetts

Vegetation Management Plan (VMP)

2021-2026

Prepared For:
Town of Milford
Department of Public Works
30 Front Street
Milford, MA 01757

Prepared By:
BETA Group, Inc.
315 Norwood Park South,
2nd Floor
Norwood, MA 02062

August 2021

This page intentionally left blank

Table of Contents

Appendices

List of Tables and Figures

1. Introduction

The purpose of this Vegetation Management Plan (VMP) is to establish a five-year program to control vegetation along Rights-of-Way (ROW) within the Town of Milford. Rights-of-way are defined as any roadway or thoroughfare on which public passage is made and any corridor of land over which railroads, power lines, pipelines, channels or bicycle paths are located. In compliance with 333 CMR 11.00[1], Milford will implement this VMP to ensure regulatory and industry standards geared to the protection of residents and environmental resources are followed during the application of herbicides. The application of herbicides is completed in order to maintain ROW remain unobstructed for use by both vehicular and pedestrian traffic.

Milford is a suburban town in the Metro West area outside of Boston. The Town was incorporated in 1780 and is home to approximately 28,000 residents within a 15 square mile area. The Town maintains approximately 109 centerline miles roadway according to the Chapter 90 apportionment[2] recoded by Massachusetts Department of Transportation (MassDOT). The Town lies primarily within the Charles River watershed with the extreme western edge of Town lying within the Blackstone Valley Watershed.

Land use in Milford is most dense surrounding the downtown area and becomes less dense moving out toward the perimeter of the town. Approximately 46 percent of the existing land use is classified as forest or open space and 39 percent is classified as residential.

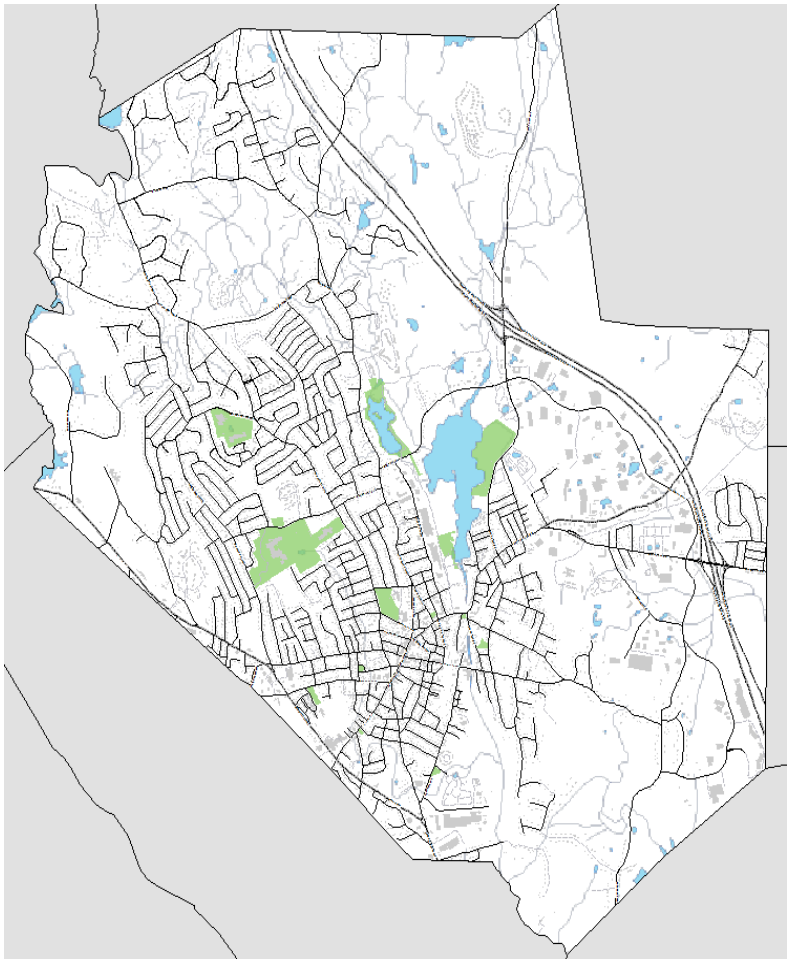

Figure 1: Town of Milford - Overall Map

[1] Appendix 1. 333 CMR 11.00 Rights of Way Managment
[2] MassDOT. Chapter 90 Apportionment FY20

2. General Statement of Goals and Objectives

Unwanted vegetation along the Town's ROW poses a public nuisance and creates hazards for both vehicular and pedestrian traffic. This plan directs that management practices along ROWs are conducted in an effective and environmentally sound manner in accordance with 333 CMR 11.00.

This document provides a basic source of information for state and municipal officials, as well as, any interested parties regarding the Town's VMP. It is further designed to provide overall guidance for licensed applicators working for the Town to physically accomplish the goals of the VMP.

The Town of Milford's vegetation management goals and objectives are as follows:

1. Maintain safe ROW clear of vegetation
2. Maximize control of undesirable vegetation while minimizing the use of herbicides through their judicious use
3. Provide guidance so that vegetation management operations are conducted in a safe, effective manner in conformity with federal and state regulations
4. Identify sensitive areas such as public or private drinking water supplies, surface waters, wetlands, inhabited areas, agricultural areas, state listed species habitat that will require special consideration during vegetation management operations
5. Maintain protective buffers at environmentally sensitive areas
6. Identify areas where herbicide use is not permitted
7. Identify champions (certified licensed employees and contractors) to implement the Town's VMP
8. Identify Town representative to quickly respond to questions or complaints from the public and/or governmental agencies regarding vegetation management
9. Identify acceptable herbicides for use in the Town from the "Sensitive Area Material List" of the Massachusetts Department of Agricultural Resources (MDAR);
10. Maintain continued assessment of treatment methods used and their cost effectiveness and impacts on the environment

3. Identification of Target Vegetation

Any vegetation that grows in such a way as to create a public nuisance or an unsafe condition that threatens the welfare of the general public and/or the environment is considered undesirable and subject to control under this VMP. In order for grasses, herbaceous plants and woody plants to be targeted as undesirable, they must meet at least one of the following criteria:

1. They cause an imminent safety hazard to the general public so that a person could be injured as a result of where the vegetation is growing. Examples would be limiting visibility to street signs, traffic signals and vehicular corridors and restricting pedestrian movement.
2. The vegetation causes a public nuisance. Native plant species growing along ROW with thorns, dense branches or of poisonous nature are typically the primary target of a VMP. Poison ivy is one of the predominant poisonous plants requiring control.
3. Vegetation that causes harm to the environment due to the location in which it is growing. Examples of this could include invasive plants crowding out desired species, disrupting biodiversity and generally damaging the integrity of the environment.
4. Vegetation that causes damage to the physical infrastructure and investment of the Town of Milford. Grasses and other herbaceous plants can grow through cracks in asphalt, within traffic island and between curbing and roadways accelerating physical damage.

Examples of Undesirable Vegetation

Roadway:
All grasses, weeds and woody vegetation growing around guardrails, signs and abutments.

Sidewalks:
Grass and herbaceous weeds in cracks and on curbs. Vines and woody vegetation encroaching from the sides. Noxious and invasive weeds like Multi-Flora Rose and Poison Ivy.

4. Methods of Vegetation Management and Rationales for Their Use

The Town of Milford utilizes four methods of vegetation management on streets and sidewalks: street weeping, hand cutting and mowing, and the fourth method is chemical treatment through the use of herbicides. The appropriate management approach is selected based on the type of vegetation, its height and density, site sensitivity, and topography.

A. Street Sweeping

Due to recent changes in storm water regulations, the Town has developed a comprehensive street sweeping program that provides the additional benefit of removing debris and weeds growing in the roadways. Street sweepers clean gutter lines and streets throughout the course of the year as weather permits.

B. Hand Cutting

Hand cutting consists of the mechanical cutting of target species using pruning shears, loppers, power trimmers, and power saws. Target vegetation is cut as close to the ground as practical. Debris is either swept up or chipped up upon completion.

Hand cutting is used in order to protect environmentally sensitive sites or on target vegetation where foliar treatment using herbicides is prohibited by regulation or easement restriction. Hand cutting may be used at any time of year.

C. Mowing

Mowing consists of the mechanical cutting of target species. Several types of mowers may be utilized depending on the species and the topography in the ROW. These include boom mowers, commercial walk-behind mowers, riding mowers and line trimmers. Mowing shall be used where vegetation type and size allow for its use. It is the primary method of management on the shoulders of roadway.

D. Chemical Treatments

Herbicides are used to control undesirable vegetation through foliar application or cut stump treatment. The primary reason herbicides are used is for their ability to kill the root system of the undesirable plant, and therefore eliminate its ability to re-sprout. Additionally, herbicides are more cost effective when compared to other control methods.

Types of application equipment or methods:

1. Low pressure backpack: A hand pumped or motorized backpack sprayer with a handheld gun or wand used to treat individual plants.
2. Low pressure hydraulic pump utilizing handheld gun: A gas or electric powered pump on a vehicle with a hose and gun which the operator uses by hand.

Chemical treatments are used within the cleared width of the streets and sidewalks and in compliance with 333 CMR 11.00.

Application of foliar treatments is limited to the season when leaves are fully developed in the spring until early fall when leaves begin dropping off the trees approximately, June 10 to September 20. Foliar treatments will only be applied to targeted species with a height of 12 feet or less. All applications shall be performed in accordance with manufacturer labels and United States Environmental Protection Agency guidelines.

E. Summary

Milford will select the most appropriate method of vegetation management for a given situation. Hand cutting and boom flail mowing is presently the most common method of control used by the Town of Milford. Chemical treatments are used primarily on Main Street where cutting or mowing is ineffective, such as on areas of the sidewalk surface.

5. Justification of Herbicide Applications

The Town of Milford will employ a VMP emphasizing selective and minimal herbicide use to control undesirable vegetation on ROWs. This program evaluates the use of selective herbicide application, against, mechanical cutting, and street sweeping. The Town believes this program is the safest, most environmentally sound and cost-effective program currently available. The Town of Milford uses only MDAR approved Sensitive Area Herbicides.

Herbicides are applied selectively in small quantities. Herbicide formulations used are low in acute toxicity, do not bio-accumulate and, as applied, have a short life span in the environment with very low soil mobility, therefore there is little to no adverse effect on the public or the environment. Further, public exposure could be considered virtually negligible due to the high degree of control of the herbicide solutions inherent in the treatment methods and the behavior of the selected herbicides. A possible route for public exposure to these herbicides is through drift during foliar treatments. The Town's VMP eliminates significant drift from foliar treatments by requiring the use of low drift agents and prohibiting treatments in high wind situations. Treatments are conducted in a manner when pedestrian traffic is minimal and controlled. Treatments will not be conducted during precipitation events when runoff is possible.

Herbicides used selectively have been demonstrated to be the most ecologically sound vegetation management method especially, when compared to mechanical methods. Management through herbicide application is preferred when controlling plants that pose a health hazard for technicians in the field. For example, poison ivy is extremely hazardous to handle and resistant to mechanical removal. Pulling curbside plants manually also puts technicians at risk from traffic. Mechanical means do not provide long term control.

It is important to reemphasize that the use of herbicides is not appropriate or necessary in all situations. Herbicides will not be used if site sensitivity, regulatory, or easement restrictions, target species composition or height recommend otherwise. For example, herbicide treatments will not be used on target vegetation in standing water or within designated no spray areas around drinking water supplies.

Presently, there is no practical alternative to a properly planned and implemented VMP emphasizing the selective use of herbicides. Used properly, herbicides are relatively safe, efficient and effective in providing the necessary control of target vegetation and will not cause unreasonable adverse effects.

6. Sensitive Area Identification and Vegetation Control Strategies

Sensitive Areas are defined in 333 CMR 11.04 as areas within Right-of-Ways, including No-Spray and Limited-Spray Areas, in which public health, environmental or agricultural concerns warrant special protection to further minimize risk of unreasonable adverse effects. Protecting these areas is paramount and accomplished by defining sensitivity and treatment restrictions.

Maps indicating the location of these areas are provided in Appendix 2.

Sensitive Areas include:

Water Supplies	Surface Waters	Cultural Sites	Wildlife Areas
Zone I	Wetlands	Agricultural Area	Certified Vernal Pool Habitat
Zone II	Water Over Wetlands	Inhabited Area	Priority Habitat
IWPA (Interim Wellhead Protection Area)	Mean Annual High-Water Line of a River		
Class A Surface Water Sources	Outer Boundary of a Riverfront Area		
Tributaries to a Class A Surface Water Source	Certified Vernal Pool		
Class B Drinking Water Intakes			
Private Wells			

Table 1: Sensitive Area Classifications

Sensitive areas consist of no-spray areas where herbicide use is prohibited, and limited spray areas where under certain conditions use is allowed. In limited spray areas, herbicides must be selected from the sensitive area material list[3] and be applied at no more than minimum recommended application rate for targeted vegetation.

A guide to the use of herbicides in Sensitive Areas is provided in the following table:

Sensitive Area	No Spray Zone	Limited Herbicide Use Zone	Where Identified
Wetlands and Water Over Wetlands	Within 10 Feet	10-100 feet; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	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;	Maps and identify on site

[3] Massachusetts Department of Agricultural Resources.
https://www.mass.gov/service-details/rights-of-way-sensitive-area-materials-list

		Selective low pressure, using foliar techniques or basal or cut-stump applications	
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	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	Maps
	Within 10 feet of any tributary or associated surface water body located outside of 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		
	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	Maps (if available) 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; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	Maps and identify on site
Agricultural and Inhabited Area	N/A	0-100 feet 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	Maps and identify on site
State-listed Species Habitat	No application within habitat area except in accordance with a Yearly Operational Plan approved in wiring by the Division of Fisheries and Wildlife		Maps

Table 2: Sensitive Area Restriction Guide

In this policy, the Town of Milford's intent is to only use herbicides and application methods recommended for the use in sensitive areas as per 333 CMR 11.4 (d) on the full length and the width of all streets and sidewalks to be treated.

Sensitive areas not readily identifiable in the field shall be located using the appropriate reference material and maps before the time of treatment.

Reference materials and sources to be utilized to identify sensitive areas include, but are not limited to the following:

1. U.S. Geological Survey Topographic maps;
2. DAR staff and data resource;
3. Massachusetts Dept. of Environmental Protection Water Supply maps;
4. Wetlands Conservation maps;
5. Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program (NHESP);
6. Municipal maps or records, including information provided in response to the required municipal notification letters;
7. Milford Board of Health: a list of private water supply wells;
8. Milford Conservation Personnel;
9. Massachusetts Geographic Information System (GIS) and the Town of Milford (GIS);
10. Milford Water Company

These materials and sources shall be compiled and referenced when available, prior to the commencement of the treatment operation.

Control strategies to be utilized within and adjacent to Sensitive Areas are detailed on maps. In areas where herbicides are prohibited, as identified on the map, hand cut and/or mowing methods are to be used.

7. Operational Guidelines for Applicators Relative to Herbicide Use

The Town of Milford will implement and practice all precautionary measures in order for operations to successfully be completed. Each application must account for several variables such as weather, location, landscape, and the experience of crews conducting treatments. Currently, all applications are completed by contractors. Precautionary measures include:

A. Safety

The Town will comply with all appropriate state and federal safety laws and regulations, this includes application sections of the Occupation Safety and Health Act (OSHA) and all worker safety related statements and instructions on the herbicide label. Applicators must follow the guidelines and requirements in this VMP and the YOP's. Pesticide applicators must hold a valid pesticide license from the Department of Agricultural Resources and all application crews must be supervised by an individual with a Category 40 pesticide license.

B. Weather

Herbicides application will be restricted during rain or windy conditions.

a. Rain

Herbicide application will not be made during periods of moderate or heavy rainfall as this will wash the herbicide from the leaves and create the potential of unwanted runoff to sensitive areas. Situations where light mist occurs may be deemed appropriate as long as there is no measurable precipitation. If foliar application are interrupted by unexpected rainfall, the herbicide application will not resume until leaf runoff stops.

b. Wind

Excessive wind can create drift during the application which can cause damage to nearby desirable vegetation on or off public ways. To prevent unwanted drift, the following restrictions will be implemented:

- During excessive periods of wind that are strong enough to bend the top of the main stems of trees, the crew supervisor will assure that there is no treatment away from the pre-determined target area. In a case where the supervisor observes any drift, the application will immediately stop until wind has subsided.

- All herbicide solutions will contain low-drift agents. Low-drift agents will be added per the low-drift agent label. In moderate wind conditions, more low drift agent may be added, per label recommendations, at the discretion of the supervisor to control risk of drift.

C. Identification of Treatment Area

Prior to application, sensitive areas will be clearly indicated by a Town of Milford employee to identify target areas, this process includes designating specific no-spray areas that may be within the application areas. Before crews arrive to apply treatment, the overall treatment area will be delineated with markers to assure applications are being applied to the correct targets.

D. Equipment and Mixing Guidelines

Prior to application, crews will inspect all equipment to confirm working order.

- Foliar application shall be calibrated to maintain a maximum pressure of 60 psi at the nozzle;
- Mixing and loading of herbicides shall be conducted in a controlled facility, currently the Town of Milford Highway Department;
- Mix only the estimated amount of herbicide need to perform the work to reduce waste or prevent overuse;
- Vehicles carrying spray equipment will be stocked with spill kits that include a bag of “Speedi-Dry”, leak proof container, a broom and a shovel;
- Herbicide labels and fact sheets must be on-site

8. Identification and Qualifications of Individuals Developing and Submitting this Plan

Mr. Scott Crisafulli is the Highway Surveyor for the Town of Milford of the Highway Department. Mr. James Asam is the Park Superintendent for the Town of Milford of the Parks Department. Both Mr. Crisafulli and Mr. Asam will oversee the implementation of the VMP and YOP.

BETA Group, Inc. (BETA) is a multi-disciplinary firm that offers civil, structural, water and wastewater, and traffic engineering; landscape architectural and urban design; stormwater and environmental solutions; and GIS and asset management all under one roof. BETA has been providing planning, engineering, design, asset management, and construction services to state agencies, municipalities, and private clients for 40 years.

Mr. Steven J. Richtarik has over 38 years of experience in the environmental engineering and environmental science fields. He has managed a wide range of contracts including: the planning and design of municipal and private wastewater treatment facilities; sewer system evaluation surveys; vegetation management plans, Brownfields Environmental Assessments; and soil and groundwater remediation. He has developed remedial action plans to support the redevelopment of several former mill complexes. Mr. Richtarik serves as Project Manager for BETA's Technical Assistance Contract with the Rhode Island Department of Environmental Management. Mr. Richtarik is a Registered Professional Engineer in the States of Rhode Island and New Hampshire and is a Class III Onsite Wastewater Treatment System Designer in Rhode Island. He has also served on the Board of Directors for the Providence Engineering Society for more than 10 years.

Mr. Tito Sanchez, GISP is a Project Manager with extensive GIS project management experience. His experience includes overseeing asset management projects and working with clients to provide intuitive online mapping solutions. Mr. Sanchez holds a B.S. in Geography and B.S. in Environmental Science.

Mr. Brett Sinica is a GIS Analyst and Asset Management Coordinator specializing in database creation and analysis, in addition to design and capital improvement planning for transportation and asset management projects. Mr. Sinica also has a B.A. and M.A. in Geography.

9. Description of the Town's Vegetation Management Plan

A detailed description of the IPM Program, showing how it will minimize the amount and frequency of herbicide application.

The use of herbicides, as outlined in this VMP, are applied to streets and sidewalks as a means of controlling target vegetation, while reducing reliance on chemical pesticides by using selective pesticides, timing applications to maximize control while minimizing pesticide use and avoiding fixed application schedules, utilizing street sweepers, mowers, and hand cutting methods. Protecting non-target organisms and environmentally sensitive areas.

The Town's VMP program recognizes and considers all concepts identified in the VMP definition:

- Reducing reliance on chemical pesticides
- Using selective pesticides/application procedures
- Timing applications
- Avoid fixed applications schedules
- Protecting non-target organisms
- Protecting environmentally sensitive areas

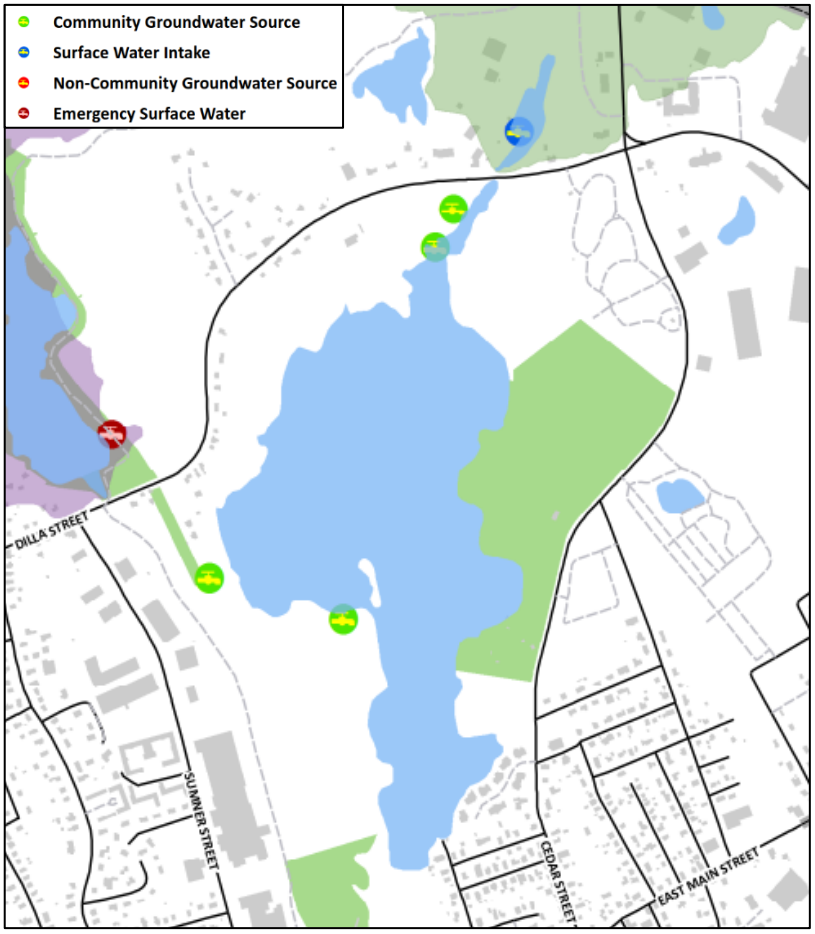

Figure 2: Milford Pond Area PWS

10. Alternative Land Use

Every effort will be given for alternative land use options. However, there are specific criteria to be met for adoption of alternative land use options. First, the alternative land use option must control the undesirable vegetation in a similar manner, ecologically and efficaciously as allowed in this VMP. For example, a common practice of abutters to roadways is to mow and maintain road shoulders. In this instance, the monitoring program would reveal that the area does not warrant vegetation control. A written agreement with landowners for alternative vegetation control methods will be obtained. This agreement would clearly specify that FDPW will not treat vegetation in these areas and outline the landowner's responsibilities for vegetation control.

11. Remedial Plan to Address Spills and Related Incidents

This section is offered as a general procedural guide for responding to chemical spills or related accidents (related accidents include but are not limited to fire, poisoning and vehicle accidents). The following is, therefore, a guide to the items that will be available to the applicator on site in the event of a chemical spill or emergency.

Education and attention will be directed at accident and spill prevention. However, in the event of a spill, immediate action will be taken to contain the spill and protect the spill area. Until clean, the spill area will be protected by placing barriers, flagging or crew members at strategic locations, as appropriate. If a fire is involved, care will be taken to avoid breathing fumes from any burning chemicals.

Minor spills will be remedied by soaking it up with adsorption clay or other adsorptive material. The adsorptive material will be placed in leak proof containers, removed from the site and disposed of properly. When applicable, contaminated soil will be placed in leak proof containers, removed from the site and disposed of properly. When applicable, activated charcoal will be incorporated into the soil at the spill location at a rate of several pounds per thousand square feet to inactivate any herbicide residue. Reportable spills will be reported to the DAR Pesticide Division.

The Massachusetts Department of Environmental Protection will also be contacted when there is a spill of a reportable quantity, regardless of major or minor spill status and in accordance with 310 CMR 40.00, Massachusetts Contingency Plan.

<u>Types of Chemical Spills that Require Action</u>
Chemicals include, but are not limited to the following:

- Herbicides
- Diesel Fuel
- Bar and Chain Oil
- Gasoline
- Motor and Hydraulic Oil/Fluids
- Title 3 Hazmat Materials

<u>Required Spill Response Equipment</u>
As a minimum, the treatment crew will have available on the job site:

- YOP with Emergency Contact List
- Shovel
- SDS (Safety Data Sheet)
- Broom
- Product Label

- Flagging
- Product Fact Sheets (when applicable)
- Leak Proof Container
- Appropriate adsorbent material
- Heavy-duty Plastic Bags

Personal Contact

In the event of Personal Contact with hazardous chemicals:

- Wash affected area with plenty of soap and water
- Change clothing which has absorbed hazardous chemicals
- If necessary, contact a physician
- If necessary, contact the proper emergency services
- If necessary, follow the procedures for Major or Minor Spills as outlined in Appendix 5
- Avoid breathing the fumes of hazardous chemicals

State Agencies to be Contacted

State Agency	Telephone Number	Special Instructions
Massachusetts Pesticide Bureau	(617) 626-1784	A.S.A.P. (within 48 hours)
Massachusetts Department of Environmental Protection, Emergency Response Section	(888) 304-1133 (after hours number)	For emergencies involving reportable quantities of hazardous materials; required info: City/town, street address, site name (if applicable), material
Massachusetts Dept of Public Health, Bureau of Environmental Health, Assessment Toxicology Program	(617) 624-5757	
Massachusetts Poison Information Centers	(800) 682-9211	For medical emergencies involving suspected or known pesticide poisoning symptoms

Table 3: Contacts – State Agencies

Emergency Services to be Contacted

Emergency Service	Telephone Number	Special Instructions
Milford Fire/Police	911	
Massachusetts State Police, Framingham Barracks	Main (508) 820-2300 (508) 820-2250	
Massachusetts State Police, Foxboro Barracks	Main (508) 820-2300 (508) 543-8550	
ChemTrec	(800) 262-8200	
Clean Harbors	(800) 645-8265	
Pesticide Hotline	(800) 858-7378	PST: 8:00 am-12:00 pm, http://www.npic.orst.edu/pest/weeds.html

Table 4: Contacts – Emergency Services

Town Services to be Contacted

Town Service	Telephone Number	Special Instructions
Milford Fire/Police	911	
Milford Conservation Agent	(508) 634-2317	
Milford Board of Health	(508) 634-2315	
Milford Highway Department	(508) 473-1274	
Milford Parks Department	(774) 462-3311	

Table 5: Contacts – Town Services