

**TOWN OF SOUTHBRIDGE
DEPARTMENT OF PUBLIC WORKS
OPERATIONS DIVISION
RIGHT OF WAY VEGETATION MANAGEMENT PLAN**

2013 THROUGH 2017

TABLE OF CONTENTS

SIGNATURE PAGE	2
INTRODUCTION	3
GENERAL STATEMENT OF GOALS AND OBJECTIVES.....	3
IDENTIFICATION OF TARGET VEGETATION.....	4
INTENDED METHODS OF VEGETATION MANAGEMENT AND RATIONALE FOR USE.....	4
SUMMARY OF CONTROL TECHNIQUES.....	6
JUSTIFICATION OF PROPOSED HERBICIDE APPLICATIONS.....	6
METHODS, REFERENCES AND SOURCES FOR IDENTIFYING SENSITIVE AREAS.....	7
SENSITIVE AREA RESTRICTION GUIDE (333-CMR 11.04).....	9
APPROVED, REGISTERED HERBICIDES FOR USE WITHIN SENSITIVE AREAS on RIGHT of WAYS.....	10
OPERATIONAL GUIDELINES FOR APPLICATORS RELATIVE TO HERBICIDE USE.....	10
INDIVIDUALS DEVELOPING AND SUBMITTING THE PLAN.....	11
DESCRIPTION OF INTEGRATED PEST MANAGEMENT PROGRAMS.....	11
DESCRIPTION OF ALTERNATE LAND USE PROVISION OR AGREEMENTS.....	12
REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS.....	12

INTRODUCTION

The purpose of 333 CMR 11.00, Rights of Way Management (ROW), is to promote the implementation of integrated pest management techniques and to establish standard requirements and procedures necessary to minimize the potential for adverse effects on human health and the environment associated with the use of herbicides to maintain streets. The ROW regulations establish procedure, which guarantee ample opportunity for public and municipal agency review and input on the Vegetation Management Plans (VMP).

Upon receipt of this VMP, the Massachusetts Department of Agricultural Resources (Department) publishes a notice in the Environmental Monitor and local newspaper. Southbridge Department of Public Works (SDPW) provided a copy of the proposed VMP and Environmental Monitor notice to the Board of Health, Conservation Commission, and the Chief-elected municipal official for the city or town in which the herbicide treatment is proposed. The Department allows a 45-day comment period on the proposed VMP beginning with publication of the notice in the Environmental Monitor and receipt of the VMP and Environmental Monitor notice by each municipality. Public notification of herbicide application to the streets is made at least 21 days in advance of the treatment by a separate notice. Notice is made to the Department, the Mayor, City Manager or chairman of the Board of Selectman, the Board of Health, the public water supply, and the Conservation Commission of the municipality where the streets lie.

Any comments on this VMP should be directed to the plan author listed on page 2.

GENERAL STATEMENT OF GOALS AND OBJECTIVES

This VMP is intended to establish the criteria whereby the SDPW will control vegetation along roads, sidewalks and highways in compliance with the ROW regulations (333 CMR 11.00). The goal of this VMP is to assure that the vegetation management practices along public roadways, sidewalks and highways are conducted in the most environmentally sound manner through an integrated program which will minimize the reliance upon pesticides. Vegetation management along roads is necessary to control unwanted vegetation, which poses a public nuisance, and to control all other obstructing woody growths that create a traffic and pedestrian hazard. The operational goal of this VMP is to utilize an integrated vegetation management program designed to maximize control of undesirable vegetation while minimizing the use of herbicides. In order of preference by SDPW the integrated vegetation management program will involve the use of cultural, mechanical and chemical control techniques to control undesirable vegetation in an ecologically sound manner. The choice of the target vegetation and appropriate control technique will be at the heart of the program. Achievement of this goal will be made through annual inspection by the SDPW of all public ways, and control of the areas as needed by the most environmentally sensitive means possible.

The SDPW have been instituting the VMP for the last 10 years with much success. The SDPW has reduced the manual labor associated with maintaining the areas of target with the VMP. The SDPW has found the reduction of use of herbicides in some areas of town due to reduction of return of unwanted vegetation. This has able the SDPW to extend the VMP to other areas that were desired to be maintained by the VMP but weren't due to fiscal restraints.

IDENTIFICATION OF TARGET VEGETATION

Target vegetation along roadways is limited to vegetation that poses a public nuisance and/or poses a risk to pedestrian or vehicular safety.

Public Nuisance Vegetation

Public nuisance vegetation includes vegetation that grows along public roads, sidewalks and highways that could pose a threat to public safety.

The overwhelming majority of plant material to be controlled is grass and weeds. Under this VMP grass, weeds, vines and poison ivy growing within 10 feet of the ROW will be considered target vegetation.

In most instances grass is a desirable plant species. Along the shoulders of roads, grass growth will be encouraged and maintained through mechanical mowing. However in some instances, grasses may grow in areas where control is best achieved by the use of herbicides. These areas include but are not limited to cracks in asphalt and along guardrails. In these instances, grass can become target vegetation.

Vegetation Posing a Risk to Safety

The vegetation that hampers visibility or impedes movement along roads, sidewalks and highways is considered a risk to public safety. M.G.L. Chapter 87, section 5 authorizes the tree wardens to have control of all "public shade trees, shrubs and growths" along public ways. Mowing and/or hand cutting shall control most plants that interfere with traffic and visibility. However, due to topography, rate of growth, or physical characteristics, certain plant species are best controlled by herbicides.

Vegetation intended for control by herbicides fall into two categories: low growing species and tall growing species. Some of the low growing plant species include:

Japanese Bamboo "Polygonum cuspidatum"

Multiflora Rose "Rosa Multiflora"

Wild Grape "Vitis sp."

Invasive Honeysuckle "Lonicera sp."

Poison Ivy "Toxicodendron Radicans"

Oriental Bittersweet

Tall growing species mostly include trees. Hardwood and softwood species that are capable of interfering with pedestrian and traffic safety are either selectively pruned, ground cut, or when less than 12 feet tall maybe foliar treated. Occasionally, conditions warrant the treatment of these cut stumps with an herbicide to prevent resprouting. Some of the species controlled this way are:

Oak sp. "Quercus sp."

Cherry sp. "Prunus sp."

Maple sp. "Acer sp."

Elm sp. "Ulmus sp."

INTENDED METHODS OF VEGETATION MANAGEMENT AND RATIONALE FOR USE

(INCLUDING VEGETATION CONTROL TECHNIQUES, EQUIPMENT PROPOSED FOR USE AND TIMING OF APPLICATIONS, AND ALTERNATIVE CONTROL PROCEDURES)

Roadway vegetation management involves mechanical methods (hand cutting, mowing, selective trimming) and chemical control (foliar herbicide treatments and cut stump treatments). The methods listed above will be chosen based on a variety of factors. The method chosen for a given vegetation problem will attempt to achieve a long term, low maintenance vegetation management program. Street sweeping with the SDPW's mechanical street sweeper will be used to keep debris and build up of dirt along gutter lines to a minimum. The main core of downtown streets

are usually swept weekly during summer and fall months following a thorough sweeping of every street in town starting in the spring of every year. This operation will start as soon as the winter weather subsides.

Hand Cutting

Hand cutting consists of the mechanical cutting of target species using chain saws and brush saws. Target species are cut as close to the ground as practical. Hand cutting is used on those restricted sites where terrain, site size or sensitivity renders mowing impossible or impractical. Hand cutting may be used at any time of the year.

Mowing

Mowing consists of the mechanical cutting of target vegetation using machines. Depending upon the sources available, mechanical cutting may be made using a homeowner type push mower, a large rider mower, brush hog, edgers, and “weed wackers”. Selection of specific equipment is based on terrain, target vegetation size and equipment availability. Mowing shall be used in most areas where terrain and target stem size permit efficient use of the equipment and especially in areas where herbicide use is prohibited by regulation. Mowing shall be the principle vegetation control measure on the shoulders of roads.

Foliar Treatments

Foliar treatments involve the selective application of an herbicide diluted in water, to the foliage of the target vegetation. These applications will be done below 60 psi. at the nozzle.

Foliar treatments can be made using squirt bottles or hand pumped backpack application equipment. The herbicide solution is applied to lightly wet the target plant. This technique has few limitations with the exception being reduced effectiveness on tall, high-density target vegetation.

Foliar Treatments will only be used on hardwood target species below twelve feet in height, conifers below 12 feet in height, grasses and herbaceous weeds and vines.

Foliar applications will take place when plants are in full leaf and actively growing, and in accordance with the manufacturer's recommendation on the herbicide label. The equipment that will be used for this operation will be a 200gallon capacity poly tank equipped with a 5.5 horsepower motor. The application will be made with a handheld spray gun. The tank will be slid into the back of a pick-up truck and secured. Smaller areas in which foliar applications need to be made will be done with a 5gallon backpack sprayer. This sprayer is equipped with a hand held pump system and adjustable spray nozzle. A coarse spray pattern will be used to minimize drift.

Cut Stump Treatment

Cut stump treatments consist of mechanical cutting of target species using chain saws immediately followed by an herbicide treatment applied to the freshly cut surface of the stump. The herbicide can be applied to the cut stump with a backpack sprayer, squirt bottle or painted on. The herbicide is limited to the freshly cut surface of remaining stump. The cutting procedure is identical to that outlined in Hand Cutting. Hardwoods greater than 12 feet tall and Pitch Pine greater than 12 feet tall will be cut stump treated. Conifers, other than Pitch Pine, greater than 12 feet tall will be cut only.

Selective Trimming

Selective Trimming consists of the mechanical pruning of the tops or encroaching limbs of tall trees, which may hamper access to the roadway. This trimming will be accomplished using aerial lifts mounted on trucks or, if terrain or obstructions prevent equipment access, by climbing crews.

SUMMARY OF CONTROL TECHNIQUES

TARGET	TECHNIQUES	COMMENTS
Poison Ivy	Foliar	Must be growing within 10 feet of the roadway. Spot treatment will be made using the foliar applications in most cases, except no spray zones around sensitive areas
Grasses	Mowing	In most cases
	Foliar	Spot foliar application treatments of grass growing along curbs or in cracks where mowing is not practical.
Low growth	Mowing	In most cases, option for sensitive areas.
	Foliar	Terrain prevents mowing or hand cutting; rapid resprouting species.
	Hand cutting	Terrain prevents mowing and resprouting is not a concern; option for sensitive areas.
Tall growth	Selective trimming	In cases where the visibility or interference does not warrant removal of entire vegetation; option for sensitive areas.
	Hand cutting	Terrain prevents mowing; mowing not effective due to stump size; species greater than 12 feet in height that will not resprout; option for sensitive areas.
	Foliar	Used on hardwoods less than 12 feet in height and on conifers less than 12 feet in height.
	Cut stump	For species greater than 12 feet in height that are capable of resprouting.

JUSTIFICATION OF PROPOSED HERBICIDE APPLICATIONS

The goal of this VMP is for the management of nuisance vegetation eg: (poison ivy) and other woody plants that interfere with pedestrian and traffic safety. Mechanical cutting and mowing in most instances will achieve the desired goals of controlling nuisance vegetation and vegetation that poses a risk. One of the reasons for choosing herbicide use versus mechanical control is the cost savings of labor associated with herbicide use. It is my experience that the amount of time spent trying to mechanically control the vegetation in these areas is more than double the cost effectiveness of using herbicides. The SDPW is highly taxed with requests and responsibilities to the town to maintain different facets of public works.

As previously noted, the control of public nuisance vegetation e.g.: (poison ivy) along the ROW is a major objective of this VMP. Due to the low growing nature of poison ivy, and the fact that it grows along stolons, it is nearly impossible to control poison ivy through cultivation, hand pulling or mowing at the height generally used in roadside mowing operations. Moreover, the climbing characteristics of this plant: over stone walls, tree trunks and guard rails, make mechanical control out of the question for safety and economic reasons. Through the judicious use of herbicides, the development of herbaceous communities where possible, which crowd out poison ivy, can be achieved. Low growing vegetation that do not present a safety hazard that occupy the same ecological niche as poison ivy, maybe excluded from both chemical and mechanical control techniques.

Other Species

Woody vegetation (low and high growth species) growing along the rights of way that interfere with pedestrian or vehicles is controlled by a variety of techniques. Pruning or ground cutting using hand tools or chain saws primarily controls large woody vegetation. Depending upon the species of plant removed and its proximity to other vegetation, these stumps may be treated with an herbicide to prevent re-sprouting. Small woody plants that are growing along the road shoulder in an accessible location will be mowed along with the roadside grass on an annual basis. Woody plants that are growing over obstacles that would impede the mower, or have a viney growth habit so that they cannot be hand cut and chipped, or that grow very rapidly, will be eliminated through the use of foliar applied herbicides. These plants include but not limited to Japanese bamboo, multifold rose, wild grape, and invasive honeysuckle. Primarily mowing will control Grass. However, nuisance grass that may grow in between guard rails or cracks in asphalt may best be controlled by spot treatment of herbicides.

METHODS, REFERENCES AND SOURCES FOR IDENTIFYING SENSITIVE AREAS

(AND CONTROL STRATEGIES PROPOSED FOR SENSITIVE AREA)

Identifying Sensitive Areas

The general definition of *sensitive areas* regulated by 333 CMR 11.04 is as follows:

...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

Sensitive Areas regulated by 333 CMR 11.00 include the following:

Water Supplies:

- Zone I's
- Zone II's
- IWPA's (Interim Wellhead Protection Areas)
- Class A Surface Water Sources
- Tributaries to a Class A Surface Water Source
- Class B Drinking Water Intakes
- Private Wells

Surface Waters:

- Wetlands
- Water Over Wetlands
- The Mean Annual High Water Line of a River
- The Outer Boundary of a Riverfront Area
- Certified Vernal Pools

Cultural Sites:

- Agricultural Areas
- Inhabited Areas

Wildlife Areas:

- Certified Vernal Pool Habitat
- Priority Habitat.

Identification Methods

Two simple descriptions guide the complex identification of the *sensitive areas* defined in 333 CMR 11.04: *Readily identifiable in the field* and *Not readily identifiable in the field*.

Readily identifiable in the field areas will be identified, marked when appropriate, and treated according to all applicable restrictions listed in 333 CMR 11.00. Not readily identifiable in the field areas will likewise be identified, marked when appropriate, and treated when appropriate, but they are identified by the use of data marked on maps and collected included in the YOP and notification processes before the time of treatment.

The individuals assigned the task of identifying and treating *sensitive areas* in the field will use the appropriate sources and methods from the following list:

Sources to identify sensitive areas not readily identifiable in the field include:

- 1) Massachusetts Department of Environmental Protection (DEP) Watershed Maps (1:25,000) delineates the perimeter of public watersheds and the location of public wells.
- 2) Massachusetts DEP Wetland Conservancy Maps (scale usually 1:1,000)
- 3) Municipal maps and records, Board of Health, Conservation Commissions, and water suppliers.
- 4) Regional Planning Agencies maps and records;
- 5) U.S. Fish and Wildlife Service National Wetlands Inventory Maps, available from the University of Massachusetts, Cartographic Information Research Services, Amherst.
- 6) Town of Southbridge watershed delineation map.
- 7) National Heritage Atlas

The following is a description of how the sensitive areas will be identified for required protection:

- 1) Consult the appropriate reference materials and sources to determine the precise location of these areas.
- 2) Place the boundaries of these sensitive areas on U.S. Geological Survey (USGS) topographical maps.
- 3) Prior to commencement of herbicide application operations, the treatment crew will be provided a marked topographic map with which to identify boundaries of the sensitive areas.
- 4) The treatment crew will deploy a crew or point person in advance of the main herbicide application operation to locate and flag these boundaries or the boundaries of the appropriate buffer zone.
- 5) No spray zones were identified as all locations within the watershed of the town of Southbridge public water supply, specifically along Eastford Road (Rt. 198) and Breakneck Road.
- 6) Orange pavement marking paint will be used to identify "No spray zones" on pavement, granite curbing and sidewalks. They will be marked with an orange line and the letters NSZ.
- 7) Qualified SDPW personnel will flag and mark the no spray zones prior to any spraying operation. Crews will be provided with street maps with no spray zones clearly marked.
- 8) Areas to be sprayed will be walked to determine sensitive areas

Sensitive areas readily identifiable in the field include surface water, habitated areas, agricultural areas, wetlands. The method used to identify these sensitive areas will be as follows:

- 1) Consult USGS topographic maps to locate any of these sensitive areas that maybe already be identified on these maps.
- 2) Prior to commencement of herbicide application operations, the treatment crew will be provided the marked topographic map.
- 3) The treatment crew will visually survey the area to be treated for any sensitive areas.
- 4) Consult with the Town of Southbridge Conservation Commission.

SENSITIVE AREA RESTRICTIONS (333 CMR 11.04)

General

In any sensitive area:

- The minimum labeled rate of herbicide for the appropriate site, targeted pest, and application method shall be applied.
- Herbicides shall be applied selectively by low pressure foliar techniques or stem application only or other method approved for use by the Department.
- Treatment in the limited spray areas require the use of herbicides from the Sensitive Area Materials list available at <http://www.mass.gov/eea/agencies/agr/pesticides/rights-of-way-vegetation-management.html> .

Sensitive Area Restriction Guide (333 CMR 11.04)

Sensitive Area	Limited Spray or No-Spray Areas (feet)	Control Method	Time Between Treatment(s)
Public Ground Water Supplies	400'	Mechanical Only	None
Primary Recharge Area	Designated buffer zone or 1/2 mile radius	Mechanical, Approved Herbicides*	24 months
Public Surface Water Supplies (Class A & Class B)	100'	Mechanical Only	None
	100'-400'	Approved Herbicides	24 months
Tributary to Class A Water Source, within 400' upstream of water source	100'	Mechanical Only	None
	100'-400'	Approved Herbicides	24 months
Tributary to Class A Water Source, greater than 400' upstream of water source	10'	Mechanical Only	None
	10'-200'	Approved Herbicides	24 months
Class B Drinking Water Intake, within 400' upstream of intake	100'	Mechanical Only	None
	100'-200'	Approved Herbicides	24 months
Private Drinking Water Supplies	50'	Mechanical Only	None
	50'-100'	Approved Herbicides	24 months
Surface Waters	10'	Mechanical Only	None
	10'-100'	Approved Herbicides	12 months
Rivers	10' from mean annual high water line	Mechanical Only	None
	10'-200'	Approved Herbicides	12 months
Wetlands	10'	Mechanical Only	None
	100' or with approved Wetlands Determination 10'-100' [per 310 CMR 0.05(3)(a) & 310 CMR 0.03(6)(b)]	Low-pressure Foliar, CST, Basal, Approved Herbicides	24 months
Inhabited Areas	100'	Approved Herbicides	12 months
Agricultural Area(Crops, Fruits, Pastures)	100'	Approved Herbicides	12 months
Certified Vernal Pools	10'	Mechanical Only when water is present	None
Certified Vernal Pool Habitat	10'-outer boundary of habitat	No treatment without approval	
Priority Habitat	No treatment outside the 4 foot paved road exemption without approval of the Natural Heritage Endangered Species Program (NHESP)		

*Massachusetts Approved herbicides for sensitive sites

APPROVED, REGISTERED HERBICIDES FOR USE WITHIN SENSITIVE AREAS on RIGHTS of WAYS

Due to the ongoing changes in the chemical industry it is inappropriate to list herbicides based on today's standards. DEP and Massachusetts Department of Agricultural Resources (DAR) are continually upgrading their standards, eliminating some chemicals and adding others. Therefore, the Town's herbicide recommendations will appear in our Yearly Operational Plan, based on the Environmental Protection Agency (EPA) and DAR recommendations in place at the time of our YOP application.

OPERATIONAL GUIDELINES FOR APPLICATORS RELATIVE TO HERBICIDE USE

As required by regulation, applicators to roadside rights of way must hold a valid pesticide certification in category 40 – Rights of Way from the Department of Agricultural Resources. In addition to the applicable rules and regulations, applicators will adhere to the following operational guidelines:

Weather- Herbicide application will be restricted during certain adverse weather conditions, such as rain and wind. Herbicide applications will not be made during periods of moderate or heavy rainfall. Foliar applications are effective in light mist situations however, any measurable rainfall that creates runoff will wash the herbicide off target. If foliar applications are interrupted by unexpected rainfall, the treatment will not resume until the rain ends and active leaf runoff has ceased. Cut stump treatments will not be made during measurable precipitation and will not resume until precipitation has ceased.

Excessive wind can create drift during foliar applications. Significant herbicide drift can cause damage to desirable vegetation on or off the roadside. Cut stump treatments are much less affected by wind because they are applied in such a close proximity to the ground.

To minimize off target drift, the applicator will comply with the following restrictions:

- a. During periods of winds, which are strong enough to bend the tops of the main stems of tree species on the roadside, the applicator will periodically observe the application of the foliar treatment to insure that there is no significant movement of the herbicide moving off target, the application will immediately stop until the wind has subsided enough to permit further applications.
- b. All herbicide solutions to be used for a foliar application will contain low drift agents. Low drift agents will be added to the foliar herbicide solution as per the low-drift agent label. In moderate wind conditions, as per herbicide label recommendations, more low drift agent may be added, at the discretion of the applicator to decrease drift.
- c. Foliar treatments will not be made to target vegetation that exceeds twelve feet in height.

Equipment Calibration

Foliar application equipment will be calibrated at the beginning of the season, prior to touch-up application, and in accordance with manufacturer's recommendations. Foliar application equipment will be calibrated to maintain pressures not exceeding sixty pounds per square inch at the nozzle. Applicator nozzles will be adjusted to apply a

cone spray pattern. Foliar application equipment will be adjusted to apply a coarse spray pattern when using the backpack sprayer to apply to smaller areas.

Cut stump treatment squirt bottle applicators will be adjusted to deliver the herbicide solution in a thin stream to the target zone.

Private Properties –

Trees located on private property will not be treated unless there is approval given by the landowner in writing.

Sensitive Area Restrictions –

In defined sensitive areas, there exist a no-spray buffer zone where herbicide use is prohibited and a zone where herbicide use is allowed under certain conditions. In areas around sensitive areas where herbicides use is allowed, only the minimum labeled rate of application for the control of target species can be applied.

INDIVIDUALS DEVELOPING AND SUBMITTING THE PLAN

A Town employee will perform the herbicide treatments, and no outside contractor will be involved. That person is Ronald E. Trudeau Jr. Operations Manager, Department of Public Works, a Massachusetts licensed certified applicator in category 37- Turf since 1981 and licensed certified applicator in category 40- Rights of Way since 1997. He holds an Associates of Science Degree from the Stockbridge School of Agriculture at the University of Massachusetts in Amherst, Massachusetts. He majored in Turfgrass Management and graduated in 1981. He has been employed by the town for the last 26 years. He can be reached at (508) 764-5433.

Supervising the VMP is Director of Department of Public Works Tom Daley, who is a Registered professional Engineer and holds both a Bachelor of Science in Civil Engineering. He has held this position for 2 years. He has also worked for other municipalities. He can be reached at (508) 764-5403.

DESCRIPTION OF INTEGRATED PEST MANAGEMENT PROGRAMS (OR OTHER TECHNIQUES/PROGRAMS TO MINIMIZE THE AMOUNT AND FREQUENCY OF HERBICIDE APPLICATION)

Integrated Pest Management (IPM) as it applies to roadside maintenance involves utilizing a variety of techniques to control unwanted vegetation in the most ecologically based manner. This includes cultural controls that will reduce the use of vegetative management .One cultural control that the Town has been undertaking is hand pulling of weeds in the town's perennial garden located at the town common. If and when used, herbicide use will be minimized through timing of applications to maximize control, and avoiding unnecessary application schedules while protecting non-target organisms and environmentally sensitive sites. The specific components of the roadside IPM program include:

Monitoring – All roadsides will be surveyed prior to any scheduled treatment program. Monitoring will be made by foot or by vehicle. Monitoring of areas may also be the result of requests from the public.

Record Keeping –In addition to the record keeping requirements of the Pesticide Board regulations, a log of areas surveyed will be kept for future planning and reference. Areas maintained either through mechanical or chemical control would be recorded.

Control Tactics- the decisions to use one of the vegetation control techniques will depend on evaluating the specific situation. Emphasis will be given to the control tactic that will address the vegetation problem in the most environmentally sound manner and in a way to minimize vegetation control in the long term.

- A. Mechanical Controls
 - 1. Selective pruning
 - 2. Ground cutting
 - 3. Mowing

- B. Chemical Controls
 - 1. Cut stump treatments
 - 2. Foliar treatments

DESCRIPTION OF ALTERNATE LAND USE PROVISION OR AGREEMENTS

(THAT MAY BE ESTABLISHED WITH INDIVIDUALS, STATE, FEDERAL OR MUNICIPAL AGENCIES THAT WOULD MINIMIZE THE NEED FOR HERBICIDE, INCLUDING THE RATIONALE FOR ACCEPTING OR DENYING ANY REASONABLE REQUEST MADE BY AN INDIVIDUAL.)

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 SDPW would not treat vegetation in these areas and outline the landowner's responsibilities for vegetation control.

REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS

All mixing and loading of herbicides will be conducted at the central facility where the herbicides are stored. Only the amount of herbicide necessary to carry out the vegetation control, based on the monitoring results, will ensure that there will be no waste and minimize potential problems. The vehicle carrying out the spray operation will be equipped with a bag of absorbent, activated charcoal, leak proof containers, a broom and a shovel in case of minor spills. A clipboard log of the herbicides on the vehicle will be kept on the vehicle. Herbicide labels, fact sheets and the YOP will be carried on site by the applicator.

As soon as any spill is observed, immediate action will be taken to contain the spill and protect the spill area. The cause of the spill must be identified and secured. Chemical spills may be either herbicide or gas and oil from the spray equipment. Spill containment will be accomplished by covering the spill with adsorptive clay or other adsorptive material or, for large spills, building clay or soil dikes to impede spill progress. Absorbing pads and

snakes will also be used to contain and absorb spills. The crew members will place appropriate barriers, flagging and stay on location until completely clean. If a fire is involved, care will be taken to avoid breathing fumes from any burning chemicals.

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

- Herbicide label
- Herbicide MSDS sheet
- Herbicide manufacturer
 - DOW (517) 636-4400
 - DuPont (800) 441-3637
 - Monsanto (314) 694-4000
 - Agrevo (800)-471-0660
- Massachusetts Pesticide Bureau (617) 626-1781
- Massachusetts Department of Environmental Protection Incident Response Unit (617) 556-1133 or (888) 304- 1133
- Massachusetts Department of Public Health,
 - Bureau of Environmental Health (Toxicology Program) (617) 624- 5757
 - Chem Trec (800) 424- 9300
- Southbridge Police and Fire Departments Emergency # 911

Minor spills will be remedied by soaking up the spill with adsorptive clay or other adsorptive material and placing it in leak proof containers for proper disposal. Dry herbicides, such as granules, will be swept up or shoveled up directly in leak proof containers for proper disposal all contaminated soil will be placed in leak proof containers, removed from the site and disposed of properly. Activated charcoal will be incorporated into the soil at the spill location at a rate of seven pounds per thousand square feet to inactivate any herbicide residue. All spills of reportable quantities will be reported to the Department of Environmental Protection and the Pesticide Bureau.