

# **Vegetation Management Plan**

**City of Holyoke, MA**

**2020 to 2024**

## **Table of Contents**

<b>Title</b>	<b>Page No.</b>
<b>Introduction</b>	<b>2</b>
<b>Statement of Goals and Objectives</b>	<b>2</b>
<b>Identification of Target Vegetation</b>	<b>3</b>
<b>Vegetation Management Methods</b>	<b>3</b>
<b>Justification of Herbicide Application</b>	<b>5</b>
<b>Sensitive Area Identification</b>	<b>6</b>
<b>Operational Guidelines for Applicators Relative to Herbicide Use</b>	<b>9</b>
<b>Qualifications of Individuals Developing and Submitting the Plan</b>	<b>11</b>
<b>Herbicide Application Minimization</b>	<b>11</b>
<b>Alternative Land Use Options</b>	<b>12</b>
<b>Monitoring</b>	<b>12</b>
<b>Notification Procedures</b>	<b>12</b>
<b>Remedial Plan to Address Spills and Related Accidents</b>	<b>12</b>

## **Introduction**

The purpose of this Vegetative Management Plan (VMP) is to establish the methods for the City of Holyoke to control vegetation along the public Rights-of-Way in compliance with the Rights-of-Way Management regulations 333 CMR 11.00, and other pertinent regulations. The Holyoke Department of Public Works (HDPW) manages approximately 175 miles of roads within the City as well as public sidewalks.

The primary objective is to provide safe, unobstructed ROW travel for all modes of transportation. Vegetation must be controlled where it may inhibit access for the public and compromise sightlines, roads, sidewalks, bike paths, and drainage.

It is the policy of the HDPW to use only herbicides and application methods recommended for use in sensitive areas, as per 333 CMR 11.04 (d).

Historically in the City of Holyoke, the VMP has been a universal success. Through vegetation management we are able to eliminate the unwanted weeds which grow tall in our downtown street cracks. As such, the streets look clean, safe, and visually appealing to residents.

## **Statement of Goals and Objectives**

The goal of this VMP is to assure that the vegetation management practices along Holyoke's ROW are conducted in the most environmentally sound manner. The purpose of the plan is to document the City's VMP standards, practices, and procedures, which are designed to control undesirable vegetation on streets and sidewalks, while minimizing the risk of adverse effects on human health and the environment.

This VMP is intended to provide the State and Local officials, and any other interested parties a basic source of information on the City's VMP. This document is further designed to provide overall guidance for the contracted licensed applicator(s) working on behalf of the City to physically accomplish the plan.

The goals and objectives of this plan are as follows:

- To utilize a VMP program designed to maximize control of undesirable vegetation while minimizing the use of herbicides through their judicious use.
- To ensure that all vegetation management operations are conducted in a safe, effective manner and in conformity with local, state and federal laws, regulations and permit conditions.
- At a minimum, to treat all public or private drinking ground or surface water supplies and associated tributaries, surface waters, wetlands, certified vernal pools, inhabited areas, agricultural areas, state listed priority species habitat and any other areas outlined in 333 CMR 11.04 as sensitive areas that require special consideration during vegetation management operations.
- To maintain streets and sidewalks to their full width.
- To maintain protective buffers (no spray areas) at environmentally sensitive areas.
- To hand cut or mow in order to protect environmentally sensitive sites where herbicide use is not permitted.
- To comply with the law with regards to using certified and licensed applicator(s) to conduct herbicide treatments.

- To have a City of Holyoke representative respond quickly to any questions or complaints from the public and/or governmental agencies that relate to the VMP.
- To perform an annual review of the VMP to assess treatment and cost effectiveness, environmental effects, public safety and compliance with regulations.

### **Identification of Target Vegetation**

Target vegetation along roadways is limited to vegetation that poses a safety hazard, compromise infrastructure, are a public nuisance, or are invasive and may have a detrimental effect on public resources.

#### Hazard Vegetation

Hazard vegetation poses a risk to public safety and represents vegetation that impedes movement along public ways. Hazard vegetation may: obscure sightlines, obscure signs, obscure vehicular movement, create windfall hazards, and cause winter shading (causing ice/reduced melting). Hazard vegetation may include, but is not limited to trees, tree limbs and shrubs.

#### Nuisance Vegetation

This category includes nuisance vegetation that could cause problems to the general public, employees or contractors and generally includes poisonous and noxious plant species. Nuisance vegetation poses a risk to safety and health often due to dermal contact with plants that are poisonous, heavily thorned or densely colonized. Target vegetation in this category is primarily poison ivy and other nuisance vegetation within 10 feet of the edge of pavement.

#### Detrimental Vegetation

Detrimental vegetation includes grasses and woody plants that are destructive or compromise the function of infrastructure by growing in cracks along the roadway, pavement/bridge joints, medians/traffic islands, drainage structures/drainageways, trails and bike paths.

#### Invasive Vegetation

Invasive species can colonize a space and virtually eliminate the biodiversity of an area. This can result in changes in wildlife due to habitat change, impede natural hydrologic function and cause an overall change in the natural functions of an area. Vegetation listed on the Massachusetts Department of Agricultural Resources (MDAR) *Massachusetts Prohibited Plant List* is included in this category.

### **Vegetation Management Methods**

The City uses a variety of vegetation management methods depending on the individual circumstances.

#### Planting

Under the City's "Adopt an Island Program" ornamental trees, shrubs and flowers, adorn City traffic islands, curbs, tree belts and sidewalks. Approximately seventy-five (75) separate local businesses and governmental offices participate annually in this program.

#### Sweeping

Street sweepers clean all City gutters and streets at least once per year, and selective City gutters and streets up to twelve (12) times per year. A catch basin cleaner cleans all City catch basin and culverts at least once per year. These are our main methods of mechanical control.

### Hand Cutting

Hand cutting consists of the mechanical cutting of target species using chain saws or brush cutters. Target vegetation are cut as close to the ground as practical with stump heights usually not exceeding three inches. The vegetation debris is swept up upon completion and recycled as compost. Hand cutting is used in order to protect environmentally sensitive sites or on target vegetation greater than twelve feet tall where herbicide use is prohibited by regulation or on non-sprouting conifer species greater than twelve feet in height. 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 resources available, mechanical cutting may be made using a consumer type push mower, a large self-propelled or rider mower, brush hogs, edgers, and “Weed Whackers”. Selection of specific equipment is based on terrain, target vegetation size and equipment availability. The use of mowing as a treatment method is restricted by steep slopes, rocky terrain, and wet sites with deep soft soils. Mowing shall be used in most areas where terrain, site size and sensitivity permit efficient use of the equipment. Mowing is the principal vegetation control measure on the shoulders of roads. Mowing may be used at any time of the year except when snow precludes operations.

### Selective Trimming

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

### Herbicide Treatments

Foliar treatments involve the selective application of an herbicide mixed in accordance with the manufacturer label. Several types of equipment for foliar treatments may be used. These could include: backpack sprayers, hand-held pump sprayers or a motorized truck mounted sprayer. Foliar treatments with backpack and hand-held pump sprayers are used on low-density target vegetation. The herbicide solution will be diluted to the lowest rate to control the target vegetation. Motorized application equipment is used on higher density target vegetation, where the use of a backpack sprayer may not be as effective.

Foliar treatments apply a herbicide mixture to lightly wet the target vegetation. These treatments will take place when plants are in full leaf and actively growing, and in accordance with the product label. Foliar treatments are used because they are an effective and efficient method to control the whole target plant. Controlling the whole target plant reduces competition from sprout growth.

### Cut Stump Treatments

Cut stump treatments consist of mechanical cutting of target species using chain saws immediately followed by a herbicide treatment applied with a squirt bottle or painted on the freshly cut surface of the stump. The herbicide is limited to the freshly cut surface of the remaining stump. The cutting procedure is identical to the one outlined in Hand Cutting. Cut stump treatment can be performed on hardwoods and pitch pine regardless of height. Since foliar treatments are permitted only on vegetation up to 12 feet in height, vegetation over 12 feet in height can be controlled by cut stump treatments (except for conifers, other than Pitch Pine, which if greater than 12 feet tall may be cut only). Cut stump treatment is preferred during the dormant period.

### 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 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 will be recorded.

### Summary of Control Strategies

Foliar spraying is applied to less than half of the City streets, where the other, more common methods of vegetation control are ineffective. Control strategy is generally categorized as follows:

<u>Target</u>	<u>Techniques</u>	<u>Comments</u>
Poison Ivy	Foliar Application	Must be growing within 10 feet of the roadway. Treatment will be made using the foliar application method in most cases, except no spray zones around sensitive areas.
Grasses & Weeds	Mowing	In most cases where appropriate.
	Foliar Application	Spot treatment of grass growing along guard rails or cracks where mowing or cutting is not practical.
Low growth	Mowing	In most cases; option for sensitive areas.
	Foliar Application	Where terrain prevents mowing or hand cutting; rapid resprouting species.
	Hand cutting	Where terrain prevents mowing and resprouting is not a concern option; 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 Application	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 Herbicide Application**

The goal of this VMP is the management of nuisance vegetation and other vegetation that risk public safety. Planting combined with mechanical sweeping, vacuuming, cutting, mowing and trimming will in most instances achieve the desired goals of controlling nuisance vegetation and vegetation that poses a safety risk. However, these controls alone are not sufficiently effective.

The City intends to have selective herbicide use to control undesirable vegetation on and along its City streets. The City has analyzed and chosen a selective herbicide treatment program, which it believes is the safest, most environmentally sound and cost-effective plan currently available.

The control of public nuisance vegetation along the roadway 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 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 guardrails, make mechanical control out of the question for safety and economic reasons.

Chemical controls are often the preferred method or only method of control for plants which pose a health hazard for the technician in the field, either directly or as a function of location. Poison Ivy, for example, is extremely hazardous to handle, biologically resistant to mechanical removal and can pose a serious threat. Individuals attempting to control curbside plants and weeds by pulling them or trimming them can also put a technician in danger from traffic and is generally not effective for long-term control.

Mowing will control most grasses. Herbicide applications, however, are used where mechanical control is not feasible due to location, stem density and/or height. Although grass is more often a desirable vegetative cover along public ways, in areas where it is a target, it is difficult and sometimes dangerous to remove by mechanical treatment methods. These areas include, but are not limited to, cracks in asphalt, along guardrails, paved traffic islands, sidewalks and curbs. In these instances, grass can be identified as target vegetation.

Woody vegetation (low and high growth species) growing along the ROW that interfere with pedestrian or vehicle safety 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, although they often can be removed mechanically.

Small woody plants that are growing along the road shoulder in an accessible location will usually be mowed along with the roadside grass. Woody plants that are growing over obstacles that would impede the mower, or have a viney growth habit and are not practical to hand cut or chip, or that grow very rapidly, can be controlled through the use of the foliar application of herbicides.

Finally, invasive species elimination is sometimes warranted to promote the growth of a more diverse mix of vegetative species, reduce sedimentation and improve natural drainage and wildlife habitat. Managing invasive species via mechanical means can be ineffective and/or detrimental depending on the species, making the colonization stronger. In these situations, the use of an herbicide may be necessary. Working in conjunction with the Conservation Commission, there may be opportunities to remove invasive material and encourage the growth of native species.

### **Sensitive Area Identification**

Sensitive areas are defined in 333 CMR 11.00 as 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.

Each sensitive area has a defined limit for special protection to further minimize environmental and public health risks. Within sensitive areas, there are areas in which herbicide use is prohibited (No-Spray Areas) and areas where herbicide use is limited (Limited Spray Areas). These conditions, defined in 333 CMR 11.04, require the use of herbicides and application methods recommended jointly by MDAR and the Massachusetts Department of Environmental Protection (DEP). The general characteristics of the sensitive area herbicides are: low toxicity to humans and other animal species; short term soil persistence; biodegradation of active ingredients; and low soil mobility.

It is the policy of the City of Holyoke to use only herbicides and application methods recommended for use in sensitive areas, as per 333 CMR 11.04 (d), on the full length and width of all streets it shall treat. The operational effect of this policy is that outer limits of limited spray areas - the condition use zones - need not be identified in the field by treatment crews.

Sensitive areas not readily identifiable in the field include public groundwater supplies, private water supplies and public surface water supplies. The reference materials and sources used to identify sensitive areas not readily identifiable in the field include, but are not limited to the following:

- 1) United States Geological Survey (USGS) Topographic maps
- 2) Massachusetts Department of Agricultural Resources
- 3) Massachusetts Department of Environmental Protection (DEP) Watershed Maps (1:25,000); delineates the perimeter of public watersheds and the location of public wells
- 4) Massachusetts DEP Wetland Conservancy Maps (scale usually 1:1,000)
- 5) Municipal maps and records, including information provided in response to the required municipal notification letters to the Board of Health, Conservation Commission, etc.
- 6) Meetings with municipal officials or street abutters prior to or during treatment operations, and information provided to the HDPW during the public review of the YOP
- 7) Regional Planning Agencies maps and records
- 8) Dept. of Conservation and Recreation
- 9) Massachusetts Fish and Wildlife Services National Wetlands Inventory maps
- 10) University of Massachusetts, Cartographic Information Research Services, Amherst
- 11) Massachusetts Natural 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 USGS topographical maps/Geological Information System (GIS) maps.
- 3) Prior to commencement of herbicide application operations, the treatment crew will be provided the marked-up topographic map/GIS maps with which to mark boundaries of these sensitive areas.
- 4) The City will annually mark no spray areas immediately before any applications take place on the ROW to ensure no herbicide is applied in such areas.
- 5) MASS GIS

Sensitive areas readily identifiable in the field include surface waters, inhabited areas, agricultural areas and wetlands. The method utilized to identify these sensitive areas will be as follows:

- 1) Consult USGS topographic maps to locate any of these sensitive areas that may already be identified on these maps.
- 2) Prior to commencement of herbicide application operations, the treatment crew will be provided the marked topographic map/GIS maps.
- 3) The treatment crews will visually survey the area to be treated for any sensitive areas.



- 4) The treatment crew will deploy a cutting crew or point person in advance of the main herbicide application operation to locate and mark these boundaries or the boundaries of the appropriate no spray area.
- 5) The City of Holyoke has received a Determination of Applicability from the Holyoke Conservation Commission.

**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	Zone II 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

### Control Strategies

Control strategies to be utilized within and adjacent to Sensitive Areas are detailed in the Holyoke Conservation Commission's Determination of Applicability. Illustration A and B (see Appendix 3). In areas where herbicides are prohibited (No Spray Areas), mechanical methods only are used.

### Massachusetts Endangered Species Act

The Massachusetts Endangered Species Act, M.G.L. c. 131 A, and regulations promulgated thereunder, 321 CMR 10.00, sets forth procedures for the listing of Endangered, Threatened, and Special Concern species native to Massachusetts; the designation of Significant Habitats for such species; and, establishes rules and prohibitions regarding the activities which take species or alter their *habitats as identified in the current Massachusetts Natural Heritage Atlas*.

Provisions of 321 CMR 10.00, Part 11, allow the Natural Heritage & Endangered Species Program (NHESP) to designate Significant Habitat on any land in the Commonwealth. The HDPW would be notified as an owner of interest in any Significant Habitat that incorporates right-of-way. No such designations have been made to date. Vegetation management activities within Significant Habitats require an Alteration Permit from the Director of the Division of Fisheries and Wildlife, 321 CMR 10.00, Part 111. The HDPW will, when it becomes necessary, seek such a permit under the Coordinated Permit Review process of the Regulations, Section 10.38.

### **Operational Guidelines for Applicators Relative to Herbicide Use**

All vegetation management applications will comply with applicable Local, State, and Federal laws and regulations. Herbicide spraying will be done by either a licensed Contractor or a licensed HDPW employee. In addition to the applicable rules and regulation, applicators will adhere to the following operational guidelines.

### Safety

All appropriate local, state and federal safety laws and regulations will be followed. This includes applicable sections of the Massachusetts Department of Agricultural Resources Pesticide Bureau "Storage, Mixing and Loading of Pesticides Guidelines," and all worker safety related statements and instructions on the herbicide label.

### Weather

Herbicide applications will be restricted during certain adverse weather conditions such as rain and wind.

1. 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 leaf 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.
2. 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 close proximity to the ground.

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

1. During windy conditions, which are strong enough to bend the tops of the main stems of tree species, the MA. certified applicator will observe the application of the foliar treatment to ensure that there is no significant movement of the herbicide. If the certified applicator can see the herbicide moving off target, the application will immediately stop until the wind has subsided enough to permit further application.

2. 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 condition, as per label recommendations, more low-drift may be added, at the discretion of the certified applicator to control drift.
3. Foliar treatment will not be made to target vegetation that exceeds twelve feet in height.

#### Equipment Calibration

Equipment calibration for selective herbicide applications utilized by the HDPW is based on attaining the proper coverage of target species and not exceeding minimum label rates on the manufacturer's instructions. Foliar application equipment will be adjusted to apply a coarse spray pattern. Pressure at the nozzle of hand- pump sprayers and motorized truck mounted sprayers will be kept to the minimum setting required to transport the herbicide solution to the tops of each target so it covers foliage and other green tissues.

#### Street Vegetation Management Width

The HDPW's VMP must be applied to remove and/or control all undesirable vegetation within the City streets.

#### Sensitive Area Restrictions

In defined sensitive areas (see City of Holyoke Streets/Wetlands/Application Map, Appendix 3), there exist no-spray areas (red-colored) where herbicide use is prohibited and limited use spray areas where herbicide use is allowed under certain conditions. In areas around sensitive areas where herbicide use is allowed, only the minimum-labeled rate of application for the control of target species can be applied.

#### Duties and Responsibilities

Vegetation management operations must be conducted according to this VMP and according to the written instructions of the HDPW. Failure to do so is grounds for immediate cessation of operations and disciplinary action, up to and including discharge, at the discretion of the HDPW General Superintendent (a. k. a. "Superintendent").

The HDPW requires the following:

1. Appropriately licensed and/or certified applicator(s) who are knowledgeable with regard to all aspects of the VMP and YOP, and who are responsive to the guidance of the HDPW. Such certified applicator(s) must be able to effectively communicate with the public. They must also effectively supervise any support crew in order to insure the satisfactory completion of the treatment operation and compliance with all appropriate standards and regulations.
2. Compliance with all applicable Local, State and Federal laws and regulations.
3. Herbicides, adjuvants, carriers and additives (hereinafter referred to as "materials") and applicable mixture rates will be specified by the certified applicator on a daily basis in accordance with the current year YOP. The certified applicator is responsible for the proper disposal of all excess materials and solutions in accordance with all applicable Local, State and Federal laws, regulations and guidelines.

### Street Specifications

The Certified Applicator(s) in coordination with the Superintendent will determine which Street ways to be treated, the range of dates of treatment and the methods, materials and mixing rates to be used.

The City of Holyoke will supply the contracted certified applicator(s) with maps from the YOP indicating treatment restrictions and written instructions outlining any special treatment considerations for each right-of-way.

No work will be done until the contracted certified applicator(s) have the appropriate maps, permits, restriction list, mixing rate instructions, daily log sheets, applicable MSDS and pesticide labels, and YOP in-hand.

### **Qualifications of Individuals Developing and Submitting the Plan**

The City feels strongly that it is necessary to have qualified professionals to conceive, design, implement and supervise all phases of its VMP. Michael McManus, the General Superintendent of the Department of Public Works, has developed and submitted this VMP. Mr. McManus has over 21 years of municipal public works related experience, a BS in Civil Engineering from Northeastern University and a MS from Worcester Polytechnic Institute, both with a focus on Environmental Engineering. He will serve as the City of Holyoke's main contact and oversee all VMP activities.

### **Herbicide Application Minimization**

When used, herbicide use will be minimized through timing of applications to maximize control, and avoiding fixed application schedules while protecting non-target organisms and environmentally sensitive sites. The specific components of the roadside VMP program include:

#### Action Levels

Decisions to maintain vegetation (either mechanically or chemically) will be based upon the following priority levels:

- Priority One: Vegetation that interferes with traffic safety at intersections
- Priority Two: Vegetation that interferes with pedestrian safety
- Priority Three: Vegetation that interferes with traffic safety along the length of the roadway

#### Control Tactics

The decision to use one of the vegetation control techniques will depend on evaluating the specific situation. The goal of the control tactic will be to establish easily maintainable, stable plant population that will not interfere with vehicles or pedestrians. 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. Physical Controls

1. Selective pruning
2. Ground cutting
3. Mowing

## B. Chemical Controls

1. Foliar applications (hand-held and motorized truck-mounted pressurized sprayers)
2. Cut stump treatments

### **Alternative Land Use Options**

Every effort will be given for alternative land use options or agreements that may be established with individuals, state, federal, or municipal agencies that would minimize the need for herbicides.

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 thus 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 the DPW will not treat vegetation in these areas and outline the landowner's responsibilities for vegetation control.

### **Monitoring**

On an annual basis, the City will evaluate the success of the Vegetation Management Program. The goal of this monitoring plan is to evaluate the relative success of vegetation control efforts. Following application after an appropriate period of time, treatment areas will be revisited. The survivorship or regrowth of nuisance vegetation will be recorded and evaluated at an annual meeting in the fall to determine whether the program is meeting its goals. Discussion items at this annual meeting will include where the herbicide was used, where it worked and how much herbicide was used per lane mile. Recommendations on location and use will be reflected in the next year's YOP as applicable.

### **Notification Procedures**

Once approved, a copy of the VMP will be provided to the Mayor of Holyoke, Board of Health and Conservation Commission. Upon approval of the VMP and YOP and 21-days in advance of the application of herbicide to a ROW, the City will notify the MA DAR, Board of Health, water supplier, Mayor of Holyoke and Conservation Commission of the application. Notification will include: method and location of application, herbicide fact sheet, U.S. EPA registration number for herbicide and applicator contact information. Additionally, at least 48-hours prior to a ROW herbicide application, the applicant will publish in a local newspaper the following information: methods and location of pesticide application, approximate dates of herbicide application, name of herbicide(s) to be used, description/purpose of application and contact information for the designated individual representing the City whom citizens can contact.

### **Remedial Plan to Address Spills and Related Accidents**

The vehicle carrying out the spray operation will be equipped with a bag of adsorbent, activated charcoal, leak-proof containers, a broom and a shovel in case of minor spills. Only the amount of herbicide necessary to carry out the vegetation control will be carried on the vehicle. A clipboard log of the herbicides on the vehicle will be kept on the vehicle. Herbicide labels and fact sheets shall be carried on-site by the certified 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. 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. Until completely clean, protection of the spill area will be accomplished by placing barriers, flagging or crewmembers at strategic locations.

Minor spills will be remediated 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 granulars, 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.

The certified applicator is responsible for the use as well as any accidents associated with the herbicide. Any spill will be reported to the Pesticide Bureau. In addition to the Pesticide Bureau, the DEP Incident Response Unit will be notified of any spill in excess of the reportable quantity (“RQ”) value for the material, as required by MASS Contingency Plan (MCP 310 CMR 40.0000).

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

<u>Source</u>	<u>Telephone No.</u>
<b>Herbicide Label</b>	Refer to label
<b>Herbicide Fact Sheet</b>	Refer to factsheet
<b>Herbicide Material Safety Data Sheet(MSDS)</b>	Refer to MSDS
<b>Herbicide Manufacturer</b>	
Dow	(517) 636-4400
DuPont	(800) 441-3637
Monsanto	(314) 694-4000
NuFarm	(877) 325-1840
Bayer	(866) 992-2937
<b>MDAR, Division of Crop and Pest Services (Clayton Edwards)</b>	(617) 626-1700
<b>Holyoke Fire and/or Police Departments</b>	911
<b>Holyoke DPW Safety Officer</b>	(413) 322-5645
<b>Holyoke Board of Health</b>	(413) 322-5595
<b>Holyoke Conservation Commission</b>	(413) 322-5615
<b>Holyoke Hospital (Work Connection)</b>	(413) 534-2546
<b>Massachusetts Pesticide Bureau</b>	(617) 626-1781
<b>Massachusetts Dept. of Environmental Protection (DEP)</b>	(413) 784-1100 or (888) 304-1133
<b>Massachusetts Dept. of Public Health</b>	
<b>Bureau of Environmental Health, Toxicology Program</b>	(617) 339-8351
<b>Massachusetts Poison Control Center</b>	(800) 682-9211
<b>CHEMTREC</b>	(800) 424-9300
<b>National Pesticide Information Center</b>	(800) 858-7378
<b>National Animal Poison Control Center</b>	(888) 426-4435
<b>US Environmental Protection Agency (EPA)</b>	
<b>Pesticide Hot Line</b>	(800) 858-7378