CITY OF TAUNTON

Vegetation Management Plan (VMP)

2011-2015

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ROADWAY VEGETATION MANAGEMENT PLAN

GENERAL STATEMENT OF GOALS AND OBJECTIVES

The Roadway Vegetation Management Plan (VMP) for the City of Taunton is intended to establish the criteria whereby the City of Taunton Parks, Cemeteries & Public Grounds Department (PCPG) which control vegetation along roads and highways are in compliance with the Rights of Way Management regulations (333 CMR 11.00). The goal of the roadway VMP is to assure that the vegetation management practices along public roadways and trails are conducted in environmentally sound manner through an integrated program which will minimize the reliance upon pesticides. Vegetation management along roads is necessary to control unwanted vegetation that 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 (IVM) program to maximize control of undesirable vegetation while minimizing the use of herbicides. The Parks, Cemeteries & Public Grounds 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 an annual inspection by PCPG of all public ways and control of the areas as needed by the most environmentally sensitive means possible.

IDENTIFICATION OF TARGET VEGETATION

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

Public Nuisance Vegetation

Public nuisance vegetation includes vegetation that grows along public roads and paths that cause allergic or other problems. The overwhelming majority of plant material to be controlled is poison ivy.

In most instances grass is a desirable plant species. Along the shoulders of roads, grass growth is encouraged and maintained through mechanical mowing. However, in some instances, grasses may grow in areas where control is limited to the use of herbicides. These areas include cracks in asphalt, along guardrails, and between sidewalks and adjacent curbing. In these instances, grass will become target vegetation.

Vegetation Posing a Risk to Safety

The vegetation that hampers visibility or impedes movement along roads and trails is considered posing a risk to public safety. M.G.L. Chapter 87, Section 5 authorizes 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 best controlled by herbicides fall into two separate categories: low growing species and tall growing species. Tall growing species include mostly trees. Hardwood and softwood species that are capable of interfering with pedestrian and traffic safety are usually pruned or ground cut. Conditions occasionally

warrant the treatment of the cut stumps with an herbicide to prevent re-sprouting. Vegetation is less than 12 feet tall it may be foliar treated

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 will involve cultural techniques (e.g. sealing cracks in asphalt), mechanical methods (hand cutting, mowing, selective trimming) and chemical control (foliar herbicide treatments and cut stump treatments). The methods 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. It should be noted that the main goal of this plan is to control weeds in sidewalks and curbing along with poison ivy.

Control Tactics

The decision 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 in a way to minimize vegetation control in the long term.

A. Cultural Controls
    1. Sealing Cracks
    2. General Right of Way repairs (i.e. repaving, install new sidewalk)
    3. Use of ground cover where appropriate (i.e. under guardrails)

B. Mechanical Controls
    1. Selective Pruning
    2. Ground Cutting
    3. Mowing
    4. Street Sweeping

C. Chemical Controls
    1. Cut stump treatments
    2. Low pressure foliar treatments with power equipment (high volume foliar)

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 with stump heights usually not exceeding three inches. Hand cutting is used in order to protect environmentally sensitive sites or on target vegetation greater than twelve feet tall where herbicide uses is prohibited by regulation. 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 using a homeowner type push mower, a large ride mower, rotary brush mower, edger's and line trimmers. 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. Mowing may be used at any time of the year except when deep snow precludes operations.

Foliar Treatments

Foliar treatments involve the selective application of an herbicide(s) diluted in water, to the foliage of the target vegetation. Foliar treatments use low pressure, below 60 psi at the nozzle, for application.

Foliar treatments can be made using a hand pump sprayer or squirt bottles. 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.

Another foliar treatment uses tractor mounted application equipment that delivers the herbicide solution through hand held nozzles attached to a hose. The herbicide solution is sprayed to thoroughly wet the target vegetation using a water based herbicide mixture from a pressurized tank on the application vehicle. This technique is used along roadways that have good access where obstructions, terrain or site sensitivity does not exclude the equipment.

Foliar applications will take place when plants are in full leaf and actively growing and in accordance with the manufacturer's recommendations.

Cut Stump Treatment

Cut stump treatments consist of mechanical cutting of target species using chain saws immediately followed by herbicide treatment applied with a squirt bottle, a hand pump sprayer, 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 that outlined in Hand Cutting. Cut stump application is preferred during the dormant period.

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 tractors or, if terrain or obstructions prevent equipment access, by climbing crews.

SUMMARY OF CONTROL STRATEGIES

TARGET	TECHNIQUES	COMMENTS
Poison Ivy	Foliar	Must be growing within 10 feet of the roadway. Spot treatment will be made using foliar applications, in most cases, except no spray areas around sensitive areas.
Grasses	Mowing	In most cases.
	Foliar	Spot treatment of grass growing along guardrails or in cracks where mowing or cutting 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 target vegetation less than 12 feet in height.
	Cut stump	For species greater than 12 feet in height that are capable of resprouting.

JUSTIFICATION OF HERBICIDE APPLICATIONS PROPOSED

The goal of vegetation management on the public rights of way is the management of nuisance vegetation (poison ivy) and other woody plants that interfere with pedestrian and traffic safety, and the vegetation that grows in the cracks in roads, sidewalks and curbing. Herbicide use for the control of target vegetation will be a last resort.

Public Nuisance Vegetation

As previously noted, the control of public nuisance vegetation (poison ivy) along the right of way is a major objective of this vegetation management plan. 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 guardrails, make mechanical control out of the question for safety and economic reasons. In some locations, the judicious use of herbicides may develop herbaceous communities that crowd out poison ivy. The resulting herbaceous community that crowds out poison ivy can be maintained through mowing. Weeds growing in sidewalks, curbing, or between sidewalks and curbing, will also be a target of public nuisance vegetation control as part of this plan.

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, although they will generally be removed mechanically. Small woody plants that are growing along the road shoulder in an accessible location will 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 so that they cannot be hand cut and chipped, or that grow very rapidly, will be eliminated through the use of foliar applied herbicides. Mowing will primarily control grasses. However, nuisance grass that may grow in between guardrails or cracks in asphalt may best be controlled by spot treatment of herbicides, as stated above, if mechanical control is not feasible and the stem density and height warrant control.

METHODS, REFERENCES AND SOURCES FOR IDENTIFYING SENSITIVE AREAS AND CONTROL STRATEGIES PROPOSED FOR SENSITIVE AREAS.

Methods, References and Sources for Identifying Sensitive Areas

Sensitive areas defined in 333 CMR 11.04 are identified as public groundwater supplies, public surface water supplies, private drinking water supplies, surface waters, wetlands, water over wetlands, certified vernal pools, habitat areas and agricultural areas. For the purpose of identification, sensitive areas can be separated into two categories: areas not readily identifiable in the field and areas that are readily identifiable in the field.

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 Wetlands Conservancy Map (scale usually 1:1,000).
3) Municipal maps and records from Boards 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) Massachusetts Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program.

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 these areas.
2) Place the boundaries of these sensitive areas on U.S. Geological Survey (USGS) topographical maps as prepared by the City of Taunton Engineer.
3) Prior to commencement of herbicide application operations, the treatment crew will be provided the marked-up topographic map with which to flag boundaries of these 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 flag these boundaries or the boundaries of the appropriate buffer zone.
5) The local Conservation Commission Agent will assist in locating and marking sensitive areas.

Sensitive areas readily identifiable in the field include surface waters, inhabitant 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.
3) The treatment crew will visually survey the area to be treated for any sensitive areas.

Sensitive Area Restriction Guide (333 CMR 11.04)

Sensitive Area	No Spray Area	Limited Spray Area	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	Yearly Operational Plan (YOP) Maps and identify on site
Certified Vernal Pool	Within 10 feet	10 feet to the outer boundary of any Certified Vernal Pool Habitat; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps and identify on site
Public Ground Water Supply	Within 400 feet (Zone I)	Zone II or IWPA (Primary Recharge Area); 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps

Sensitive Area	No Spray Area	Limited Spray Area	Where Identified
Public Surface Water Supply	Within 100 feet of any Class A public surface water source	100 feet to the outer boundary of the Zone A; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps
	Within 10 feet of any tributary or associated surface water body located outside of the Zone A	10 feet to the outer boundary of the Zone A; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	
	Within 100 feet of any tributary or associated surface water body located within the Zone A of a Class A public surface water source		
	Within a lateral distance of 100 feet for 400 feet upstream of any Class B Drinking Water Intake	Within a lateral distance of between 100 - 200 feet for 400 feet upstream of intake; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	
Private Water Supply	Within 50 feet	50 – 100 feet; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	In YOP well list and identify on site
Surface Waters	Within 10 feet from mean annual high-water line	10 feet from the mean annual high water line and the outer boundary of the Riverfront Area; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps and identify on site
Agricultural and Inhabited Areas	N/A	0 – 100 feet 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications.	Identify on site

Sensitive Area	No Spray Area	Limited Spray Area	Where Identified
State-listed Species Habitat	No application within habitat area except in accordance with a Yearly Operational Plan approved in writing by the Division of Fisheries and Wildlife		YOP Maps

OPERATIONAL GUIDELINES FOR APPLICATIONS RELATIVE TO HERBICIDE USE

The Massachusetts Code of Regulations 333 CMR 11.00 require that commercial pesticide applicators to be supervised onsite by an individual that hold a Commercial Pesticide Certification License in the Rights-of-Way category (40). In addition all applicable laws and regulations will be adhered to.

Weather

Herbicide applications will be restricted during certain adverse weather conditions, such as rain or 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 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. Cut stump treatments will not be made during measurable precipitation. Cut stump treatments will cease 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 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 wind, which are strong enough to bend the tops of the main stems of trees 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. If the applicator can see 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 label recommendations, more low-drift may be added, at the discretion of the applicator to control increase drifts.

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 treatment, 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 coarse spray pattern.

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

Sensitive Area Restrictions

In defined sensitive areas, there exists a no-spray area where herbicide use is prohibited and a limited spray area herbicide use is allowed under certain conditions. Only chemicals approved by the DAR in sensitive areas will be used.

IDENTIFICATION AND QUALIFICATIONS OF INDIVIDUALS DEVELOPING AND SUBMITTING A PLAN

Marilyn A. Greene is the Commissioner of the Parks, Cemeteries & Public Grounds Department for the City of Taunton. Mrs. Greene has held this position since 1999. Mrs. Greene holds an Applicators License for Pesticide use from the Department of Agricultural Resources. Mrs. Greene has been in charge of roadside brush removal for the City of Taunton for the past twelve years. All applicators will have a copy of the VMP available if spraying for roadside vegetation is made.

TECHNIQUES AND PROGRAMS TO MINIMIZE THE AMOUNT AND FREQUENCY OF HERBICIDE APPLICATION

Vegetation management activities will place the non-chemical techniques as the methods of choice in light of the goal of controlling the undesirable vegetation. If and when used, herbicide use will be minimized through timing of applications to maximize control and avoiding fixed application schedules while protecting environmentally sensitive sites. The specific components of the program include:

Monitoring

All roadsides will be surveyed by the PCPG Department 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.

Maintenance

All roads will be cleaned annually by the Department of Public Works (DPW) using street sweeper. Cracking asphalt and sidewalks another right-of-way defects will be repaired. Ground cover will be used where appropriate to assist in the prevention of vegetation growth.

Record Keeping

A log of areas surveyed will be kept for future planning and reference. Areas maintained either through cultural, mechanical or chemical control will be monitored and recorded by PCPG Department.

DESCRIPTION OF ALTERNATIVE LAND USE PROVISIONS OR AGREEMENTS THAT MAY BE ESTABLISHED WITH INDIVIDUALS, STATE, FEDERAL OR MUNICIPAL AGENCIES THAT WOULD MINIMIZE THE NEED FOR HERBICIDES, INCLUDING THE RATIONALE FOR ACCEPTING OR DENYING ANY REASONABLE REQUEST MADE BY 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 would clearly specify that the PCPG will 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 vehicles carrying out the spray operations 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 and fact sheets 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. Spill containment will be accomplished by covering the spill with absorptive clay or other absorptive material or, for large spills, building clay or soil dikes to impede spill progress. Until completely clean, protection of the spill will be accomplished by placing barriers, flagging or crewmembers at strategic locations. If a fire is involved, care will be taken to avoid breathing fumes from any burning chemicals.

Minor spills will be remedied by soaking up the spill with adsorption clay or other adsorptive material and placing it in leak proof containers, removed from the site and disposed of properly. 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. Any spill will be reported to the Pesticide Bureau.

Mass DEP will be contacted when there is a spill of a reputable quantity of material.

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) 697-400
- Massachusetts Pesticide Bureau (617) 626-1781
- Massachusetts Department of Environmental Protection (888) 304-1133
- Chem Trec (800) 424-9300
- Department of Public Health – (617) 624-5757