Town of Acton, Massachusetts
Five-Year Vegetation Management Plan
2026-2030

Submitted By:
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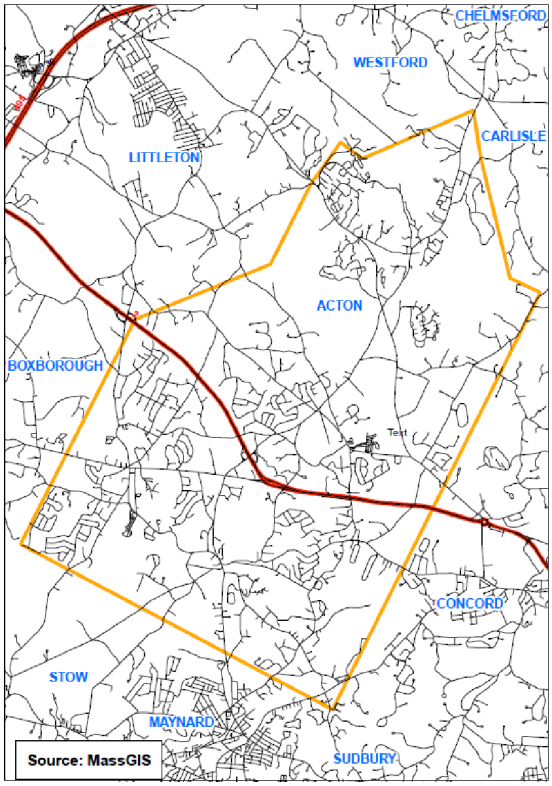
I. Introduction

This Vegetation Management Plan (VMP) establishes a five-year program to manage vegetation along the Town of Acton's municipal Rights-of-Way (ROW) as defined under 333 CMR 11.02. Such ROW include "any roadway, or thoroughfare, on which public passage is made and any corridor of land over which facilities such as railroads, powerlines, pipelines, conduits, channels or communication lines or bicycle paths are located" and thus includes roads, curbing, sidewalks, medians, traffic islands, and bicycle paths within the town. This VMP sets forth the structure for an Integrated Vegetation Management (IVM) program incorporating regulatory and industry standards to effectively manage target vegetation while minimizing herbicide use, promoting public safety, and protecting the environment.

The Town of Acton, Massachusetts was incorporated in 1735 and encompasses around 20 square miles of land and water. Although much of the town is forested, it also includes several urban centers and large swaths of residential neighborhoods. As of 2025, the Town was home to nearly 24,177 residents and had a growing population. One of the stated goals within the Acton 2020 Master Plan is for the town to be a "walkable" community. With over 100 miles of public roadways, 50+ miles of sidewalk, and several major bike trails under the maintenance of the town, a comprehensive VMP is a necessity.



Map 1. Town of Acton

II. Statement of Goals and Objectives

Vegetation management along public ROW is necessary to manage unwanted vegetation that may pose a public nuisance, cause pedestrian and/or traffic hazards, or damage structures and/or infrastructure. The goal of this VMP is to ensure that vegetation management along public ways is carried out in an effective, safe, and environmentally sound manner while following the guidelines set forth in 333 CMR 11.00.

Specific objectives of this VMP include:

- Maintain safe and unobstructed public ways
- Make all public areas of town safely accessible by foot via sidewalks, trails, and maintained road shoulders
- Ensure all vegetation management is carried out in a safe, effective, and regulatory compliant manner using certified, licensed, and qualified vegetation management personnel
- Manage target vegetation through a variety of management practices including manual, mechanical, and chemical methods
- Reduce volume and frequency of chemical herbicide applications
- Protect sensitive environmental areas
- Work toward a long-term, low-maintenance vegetation management program
- Conduct periodic monitoring and inspections to assess treatment methods, cost effectiveness, public safety, environmental effects, and regulatory compliance

Acton's VMP is designed to serve as the primary source of information for residents, public officials, and other interested parties about Acton's adherence to the regulatory standards set forth in 333 CMR 11.00. It is also intended to function as a guide for individuals involved in the ROW vegetation management program within the town.

III. Identification of Target Vegetation

Target vegetation is defined in 333 CMR 11.02 as "any plant species which has the potential to interfere with the operation and safety of the right-of-way." These plant species can be broadly categorized into four groups: species that pose a safety hazard, compromise infrastructure, are a public nuisance, or are invasive.

Vegetation Posing a Safety Hazard

Vegetation which obstructs visibility or impedes movement along public ways poses a risk to public safety. Such vegetation may obscure sightlines, signs, or vehicular movement, create windfall hazards, block storm drains, or cause winter shading leading to ice buildup. Vegetation

posing a safety hazard often includes, but is not limited to, trees or parts of trees, shrubs, and vines growing near public ways.

Public Nuisance Vegetation

Public nuisance vegetation includes vegetation growing along public ways which poses a health hazard due to heavy thorns, dense or impenetrable foliage or stems, or the poisonous or noxious nature of the plant. While poison ivy (*Toxicodendron radicans*) is the primary poisonous target species of concern in Acton, other species such as blackberries (*Rubus* spp.), Japanese knotweed (*Fallopia japonica*), and buckthorns (*Rhamnus* spp.) may also constitute public nuisances if growing too close to public ways.

Vegetation Compromising Infrastructure

While grasses are usually a desirable plant species along road shoulders, they may damage and compromise infrastructure when growing in cracks in pavement, between curbs and the adjacent sidewalk, along guardrails, in bridge joints, in drainage structures or drainways, or in paved medians and traffic islands. Although grasses are the primary type of vegetation responsible for infrastructure damage, woody vegetation may also damage infrastructure.

Invasive Vegetation

Invasive species are frequently strong competitors with no natural predators and are capable of rapid colonization and virtual elimination of native biodiversity, particularly in areas impacted by human habitation such as along roadways or in vacant lots. This can result in changes in wildlife, altered hydrologic function, and overall change in natural functions of an area. Many invasive plants also constitute a public nuisance; for example, multiflora rose (*Rosa multiflora*) can injure pedestrians and cyclists due to their arching branches and large, prolific thorns. Plant species listed on the *Massachusetts Prohibited Plant List* provided by the Massachusetts Department of Agriculture Resources (MDAR) are included in this category.

IV. Integrated Vegetation Management Program

IVM is defined in *ANSI A300 Part 7* as "…a system of managing plant communities in which managers set objectives, identify compatible and incompatible vegetation, consider action thresholds, and evaluate, select, and implement the most appropriate control method or methods to achieve their established objectives." Overarching goals of any IVM program include effective vegetation management, reduction in reliance on chemical management methods, and creation of a long-term, low-maintenance vegetation management program.

Since the sites that vegetation managers must oversee are dynamic and ever-changing, the process used to manage these systems must also be dynamic. There are six primary elements of an IVM program as laid out by *ANSI A300 Part 7*:

1. **Set objectives:** Acton will set objectives and goals which are clearly defined, based on the intended purpose and use of the site that is to be managed, and SMART (specific, measurable, attainable, realistic, and timely).
2. **Evaluate the Site:** Public ways in Acton will be evaluated by foot or by vehicle before implementing any treatment program to identify target vegetation, obstacles, and other relevant site information that will determine action thresholds and inform the choice of management methods. Monitoring may also be requested by the public and can be conducted year-round. All monitoring records will be maintained by the Trees and Grounds Division.
3. **Define Action Thresholds:** Acton will define action thresholds such as vegetation height, density, location, or condition which, when exceeding a predetermined target, will trigger the implementation of management methods.
4. **Evaluate and Select Management Methods:** The most suitable vegetation management methods are those which best achieve the management objectives defined in step 1. Acton will select one or a combination of management methods, including manual, mechanical, and chemical methods, to meet the set objectives. Vegetation management methods selected will be based on site- and situation-specific factors identified during site evaluation and will comply will all pertinent regulations.
5. **Implement Vegetation Management Methods:** All laws and regulations governing IVM will be followed by Acton during the implementation of vegetation management methods.
6. **Monitor Treatment and Quality Assurance:** Effective IVM programs must have documented processes to evaluate program results. Acton will conduct quality assurance monitoring both during and after treatment to correct small problems before they become large and provide an opportunity to modify the work plan, if needed, as site conditions change, or new challenges arise. Monitoring in Acton will also be done to assess the efficacy of past treatment programs and modify future plans accordingly.

This process is cyclical, as lessons learned from the monitoring done after treatment can be used to set new objectives and inform new decisions on the best vegetation management methods to use in each scenario.

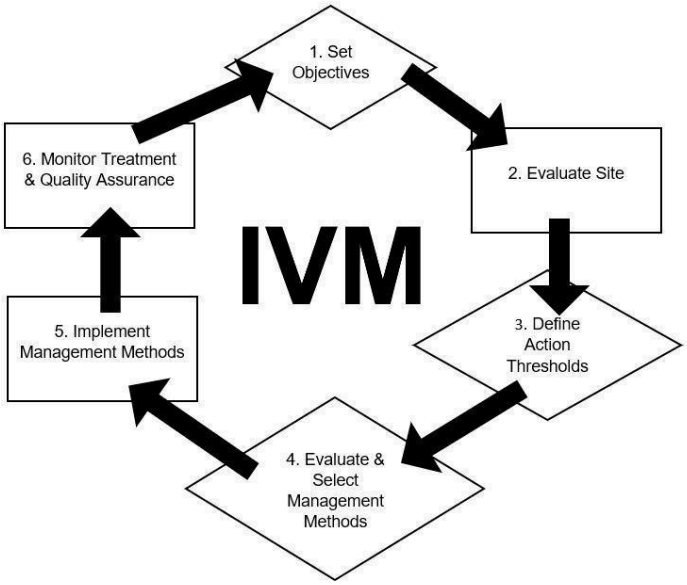


Figure 1. The steps and cyclical nature of IVM

V. Methods of Vegetation Management and Rationale for Use

Vegetation management methods used in Acton will include manual and mechanical techniques as prescribed by IVM best practices. Chemical methods will also be used when non-chemical methods are impractical or impossible, or when sufficient mitigation of target vegetation cannot be attained by non-chemical means. However, one of the primary objectives of the IVM program is to minimize herbicide use whenever possible while working toward a long-term, low-maintenance vegetation management program.

Manual Management Methods

Manual management methods are those which can be performed by workers using hand-held tools. Examples of such tools include chain saws, handsaws, and pruning shears. Manual vegetation management methods are selective, generally impacting only target vegetation, and can often be used in areas where other methods cannot be due to terrain or site sensitivity. However, they may also be more expensive, less time-efficient, and less safe than other methods. Manual vegetation management methods used by Acton include hand cutting, selective pruning, and burning.

1. Hand Cutting

Hand cutting involves the use of chain saws, hand saws, and brush saws to remove or reduce target vegetation. Target species which are being removed are cut as close to the ground as possible, ideally leaving a stump no more than three inches in height. Hand cutting is used to

remove hazard trees, to remove or reduce vegetation greater than twelve feet in height, and in environmentally sensitive areas where herbicide use is prohibited by regulation. It is also used on sites where terrain renders mowing impractical or impossible. Hand cutting may be utilized year round.

2. **Selective Pruning**

Selective pruning involves the mechanical trimming of the limbs of tall vegetation which may constitute a safety hazard. Necessary equipment for selective pruning includes aerial lifts mounted on trucks or tractors as well as hand cutting implements such as chain saws, hand saws, and brush saws. Where terrain or obstructions prevent access to the target vegetation by aerial lifts, climbing crews will perform selective pruning. Selective pruning can be done year round and may provide a viable alternative to complete vegetation removal.

3. **Burning**

Burning is used on a selective basis to remove grass and weeds growing in curb lines and pavement cracks. This method requires a hand-held, propane-fired torch and a backpack water pump as well as two operators – one to burn the target vegetation using the torch and a second to wet the area down afterwards with the water pump to prevent accidental ignition of non-target vegetation. This method is only used in limited areas where the risk of grass fire is minimal, and it cannot be used under dry or windy conditions. If this method is required, a permit will be approved by the Acton Fire Department.

Maintenance

While not a direct method of vegetation management, maintenance of infrastructure forms a key component of Acton's vegetation management strategy. Prevention of undesirable vegetation growth is often easier, safer, and more cost effective than removing established vegetation. To this end, roads will be cleaned using a street sweeper both yearly and on an as-needed basis after storms and construction projects. Ditches will be cleaned when needed. Cracks in pavement will be sealed and other ROW defects will be repaired to prevent the establishment of undesirable plant species.

Mechanical Management Methods

Mechanical management methods are accomplished using machines. These vegetation management methods can be efficient and cost-effective and are particularly useful in areas with dense or previously unmaintained vegetation. However, mechanical methods can be nonselective, disturb sensitive areas such as wetlands, establish a seedbed for and dispersal of target vegetation by agitating the ground, and leave behind petroleum products, both from normal operations and from leaks or spills. Mechanical methods are also limited by steep terrain and physical obstacles, such as stone walls or ditches. Mechanical vegetation management methods used by Acton include mowing and stump grinding.

1. Mowing

Mowing consists of the mechanical cutting of target vegetation using push mowers, riding mowers, rear deck mowers, flail-type side arm mowers, brush mowers, edgers, and line trimmers. This method is used wherever terrain and target vegetation stem size allows for safe and efficient mower use. Choice of equipment is based on terrain, target vegetation stem size, and equipment availability. Mowing is the primary method of vegetation management along road shoulders and in grassy islands as well as areas in which herbicide use is prohibited. It may be utilized at any time of year except when snow and ice prevent safe and effective mower operation or access to target vegetation.

2. Stump Grinding

Stumps generated from hand cutting which exceed six inches in diameter at ground level are ground to a depth of four inches below grade using a stump grinder. Grinding stumps removes tripping hazards, reduces stump suckering, and eliminates the risk of protruding stumps damaging mowing equipment.

Chemical Management Methods

Chemical management methods involve the application of chemical herbicides to target vegetation. Chemical vegetation management methods which Acton uses include foliar treatments and cut stump surface treatments.

1. Foliar Treatments

Foliar treatments involve the application of herbicides diluted in water to target vegetation leaves, blades, needles, and/or stems. Herbicides used will be diluted to the lowest possible percent that will provide effective management of the target species and will be used in accordance with the product label. Foliar treatments may be done after leaves are fully developed in the spring and until leaf drop begins in the fall. Application equipment for this treatment method may include backpack sprayers, hand-held pump sprayers, and sprayers mounted on motorized equipment such as trucks, tractors, or all-terrain vehicles (ATVs). Hand-held and backpack sprayers will be used for foliar treatments on areas where target vegetation density is low and spot treatment of target vegetation can be effective, or on areas where vehicle-mounted sprayers cannot be operated safely and effectively. Vehicle-mounted sprayers will be used on areas where target vegetation density is high and where obstructions, terrain, and site sensitivity do not exclude the necessary vehicular equipment.

2. Cut Stump Surface Treatments

Cut stump surface treatments consist of the mechanical cutting of target vegetation as outlined in the Hand Cutting section, followed by the application of an herbicide diluted in water, basal oil, or a non-freezing agent to the cut stump. Herbicide application will ideally be made to freshly cut stumps and will be done in accordance with the product label. Application methods

include squirt bottles, hand pump sprayers, paintbrushes, or sponges. This method reduces the visual impact of vegetation management treatments, prevents the need to re-treat sprouting stumps, and can reduce potential adverse effects to non-target vegetation due to the selective nature of the application. Cut stump surface treatments can be used year-round provided snow depths do not preclude cutting of target vegetation to three inches or less above grade. However, cut stump treatment during periods of high sap flow and/or in moderate to heavy rain is not as effective and will be avoided unless necessary.

Table 1. Summary of Vegetation Management Methods

Target	Method Type	Method	Details	Restrictions
Nuisance Vegetation	chemical	foliar	Spot treatment using backpack sprayer	Within 10 feet of public way, in no-spray Sensitive Areas
Grasses & Herbaceous Growth	maintenance		Repairs to pavement, street sweeping	N/A
	mechanical	mowing	Mitigates most sites, can be used in no-spray Sensitive Areas	Topography, obstructions, stem density
	manual	burning	Spot treatment on pavement cracks and curb lines	chance of grass fire, dry and windy conditions
	chemical	foliar	Spot treatment on pavement cracks and curb lines	Where mowing or other mechanical method is practical, in no-spray Sensitive Areas
Low Growing Woody Vegetation	mechanical	mowing	Mitigates most sites, can be used in no-spray Sensitive Areas	Topography, obstructions, stem density
	manual	hand cutting	Where terrain prevents mowing, resprouting is not a concern, can be used in no-spray Sensitive Areas	Where operator safety is a factor
	chemical	foliar	Where terrain prevents mechanical methods, rapid resprouting species, invasive plant species	Where mowing is practical, in no-spray Sensitive Areas
	chemical	cut stump	Where terrain prevents mowing, resprouting is a concern	Where operator safety is a factor, in no-spray Sensitive Areas
Tall Growing Woody Vegetation	manual	selective pruning	Where obstructions or plant risk do not warrant full plant removal, can be used in no-spray Sensitive Areas	Where removal is warranted, where operator safety issues limit access
	manual	hand cutting	Where full plant removal is warranted, where terrain or stump diameter prevents mowing, resprouting is not a concern, can be used in no-spray Sensitive Areas	Where operator safety is a factor
	mechanical	stump grinding	Where stumps may be a tripping hazard, where stumps may damage mowing equipment, resprouting is a concern	Topography or obstructions
	chemical	cut stump	Where terrain prevents mowing or stump grinding, on species over twelve feet tall that are capable of resprouting	Where operator safety is a factor, in no-spray Sensitive Areas
	chemical	foliar	Where terrain prevents mechanical treatment, spot treatments, rapid resprouting species, invasive plant species	Vegetation over twelve feet tall, where mowing is practical, in no-spray Sensitive Areas

VI. Justification of Herbicide Use

This VMP focuses on the implementation of an IVM program to minimize herbicide use within the ROW by practicing manual and mechanical vegetation management methods whenever feasible. However, while these methods can mitigate the impact of many plants which interfere with traffic, visibility, and public safety, chemical methods may be necessary in situations where terrain, access issues, target species growth rates, applicator safety, environmental or social concerns, or other site- and species-specific factors limit the potential for management by non-chemical methods.

When chemical management methods are necessary, Acton will use herbicides found on the MDAR *Sensitive Area Materials List* whenever feasible. The herbicides found on this list have several general characteristics in common, including low toxicity to humans and other animals, short-term soil persistence, biodegradation of active ingredients, and low mobility. Specific herbicide formulations and mixtures can be found in the Yearly Operational Plans (YOPs) for Acton, with manufacturers' labels and material safety data sheets in the appendices of the YOPs.

Woody vegetation over twelve feet in height which causes safety hazards for pedestrians or vehicles is managed using a variety of manual techniques including pruning or ground cutting using hand tools or chain saws. Remaining stumps are typically removed mechanically through stump grinding but, depending on the species of plant being removed and its proximity to other vegetation, stumps may be treated with an herbicide to prevent resprouting. Small woody plants under twelve feet in height which cause safety hazards, and which are growing in an accessible location, are usually mowed along with grass and other herbaceous growth. However, low-growing woody target vegetation which is growing over obstacles which would impede a mower, is not practical to hand cut or chip, grows very rapidly, and/or is otherwise resistant to mechanical and manual vegetation management methods, may be managed through foliar herbicide application.

Chemical methods are often the preferred or only effective method of vegetation management for nuisance vegetation which poses a health hazard to applicators, whether directly or due to location. Nuisance vegetation such as poison ivy is often very difficult to manage once established and preventing establishment of nuisance species by promoting the growth of robust herbaceous communities that outcompete less favorable vegetation may be effective. Once established, however, poison ivy cannot be effectively or safely managed through mowing, as it climbs over mowing obstacles like stone walls, or hand cutting, as it is biologically hazardous to handle. In these situations, herbicide applications are safer for the applicator and more effective than mechanical or manual vegetation management methods.

Grasses are usually considered a desirable vegetation cover along public ways and can typically be managed by mowing. However, areas where grass is not desirable include cracks in asphalt, along guardrails, within paved traffic islands, and in sidewalks and curbs. These areas are

difficult and may even be dangerous to manage through manual means due to the dispersed nature of the target vegetation and exposure of vegetation management crews to vehicular traffic. Chemical applications to manage grass are warranted where manual methods are not feasible due to location, stem density, and/or height of the target vegetation.

Invasive species tend to grow vigorously and are often aggressive colonizers of new areas through a variety of dispersal methods. Japanese knotweed, for example, disperses easily through small rhizome fragments. As a result, manual cutting or even digging up of invasive species seldom guarantees eradication at the original treatment site and may even lead to further colonization of new sites as pieces of the target plant are moved from the original treatment location. Similarly, mechanical methods such as mowing may create an ideal seedbed and disperse undesirable species through ground agitation. Therefore, herbicide applications are usually necessary to effectively remove invasive species. This does not preclude the combined use of other vegetation management methods, however. Treatment of Japanese knotweed with herbicides is made more effective when the weed is mowed in early summer so that by the ideal early fall treatment window it is still relatively short, allowing applicators to easily move through infested areas and apply the herbicide only to the target plants.

VII. Identification of Sensitive Areas

Sensitive areas regulated by 333 CMR 11.04 are defined 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." Protection of these areas is accomplished by identifying specific sensitive areas and establishing treatment restrictions within these areas based on the sensitivity of the site and the requirement to minimize unreasonable adverse impacts within that area.

Herbicide treatments within a sensitive area must be applied at the minimum labeled rate for the site, pest, and application method and must be applied selectively by low pressure using foliar techniques or basal or cut-stump applications. Other application methods must be approved by MDAR prior to treatment. Herbicides selected for use in sensitive areas must come from the *Sensitive Area Materials List* (https://www.mass.gov/service-details/rights-of-way-sensitive-area-materials-list).

Full restrictions on herbicide use in sensitive areas can be found in 333 CMR 11.04.

The following sensitive areas are regulated by 333 CMR 11.04:

Water Supplies, including:

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

State Listed Species Habitat, including:

Certified Vernal Pool Habitat and Priority Habitat

Surface Waters, including:

Wetlands, Water Over Wetlands, the Mean Annual High-Water Line of Rivers, the Outer Boundary of Riverfront Areas, and Certified Vernal Pools

And **Cultural Areas**, including:

Agricultural Areas and Inhabited Areas

Sensitive areas can be broadly divided into areas which are readily identifiable in the field and areas which are not readily identifiable in the field. Sensitive areas which are readily identifiable in the field include, but are not limited to, surface water, wetlands, rivers, and agricultural areas. Sensitive areas which are not readily identifiable in the field may include public groundwater supplies, private water supplies, and state-listed species habitat, among others. While the process of marking and treating these two types of sensitive area are the same, sensitive areas which are not readily identifiable in the field must be located using maps and information collected in the YOP and pre-treatment notification processes prior to the time of treatment.

Individuals tasked with identifying and treating sensitive areas in the field will consult the appropriate sources and use the appropriate methods from the following list:

- Town maps, records, and institutional knowledge
- Massachusetts Department of Environmental Protection (DEP) maps available through MassGIS (https://www.mass.gov/orgs/massgis-bureau-of-geographic-information)
- Water Department, MDAR, and Acton Board of Health information and identified private wells along the ROWs
- Correspondence, meetings, and input from the chief elected board, board of health, conservation commission, public water suppliers, and the public within the forty-five day YOP and twenty-one day municipal ROW notification letter review and comment periods and the forty-eight hour newspaper notification (under 333 CMR 11.06 and 11.07 and Chapter 85 of the Acts of 2000)
- An individual who verifies, identifies, and, where appropriate, marks sensitive areas and any additional areas that may require special precautions
- USGS topographical maps
- When necessary, confidential information from the Natural Heritage Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife (NHESP)

- A copy of the YOP and VMP

Sensitive areas will be identified for required protections in the following manner:

1) Appropriate reference materials and sources will be consulted to determine the precise locations of sensitive areas.
2) Boundaries of sensitive areas will be marked on U.S. Geological Survey (USGS) topographical maps, computer-aided drafting (CAD) drawings, or geographic information system (GIS) outputs.
3) Treatment crews will be provided with the above maps identifying sensitive areas prior to commencement of herbicide application operations.
4) The appropriate Trees and Grounds Division staff will be deployed in advance of the herbicide application operation to locate and flag sensitive area boundaries including both low-spray and no-spray areas.
5) No-spray and Limited Spray areas will be identified with red or orange paint on the curb or roadway at the start and finish of the area or with orange flags marked in the same manner.

Table 2. Sensitive Area Restrictions

Sensitive Area	No-Spray Area*	Limited Spray Area	Management Method for Limited Spray Area	Where Identified
Public Ground Water Supply	400' (Zone I)	(Zone II or IWPA)	Chemical methods will not be used in Limited Spray Areas.	YOP maps
Public Surface Water Supply (Class A public water source)	100'	100' to boundary of Zone A	Chemical methods will not be used in Limited Spray Areas.	YOP maps
Public Surface Water Supply (tributaries or associated bodies of water located in Zone A of Class A public surface water source	100'			YOP maps
Public Surface Water Supply (tributaries or associated bodies of water located outside Zone A of Class A public surface water source)	10'	10' to boundary of Zone A	Chemical methods will not be used in Limited Spray Areas.	YOP maps
Public Surface Water Supply (Class B drinking water uptake; for 400' upstream of intake)	100'	100' to 200'	Chemical methods will not be used in Limited Spray Areas.	YOP maps
Private Drinking Water Supply (Private Wells)	50'	50' to 100'	Chemical methods will not be used in Limited Spray Areas.	YOP list, identify on site
State-Listed Species Habitat**	No treatment outside the 4' paved road exemption without approval of the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife (NHESP)			YOP maps

Wetlands & Water Over Wetlands	10’	10’ to 100’	Chemical methods will not be used in Limited Spray Areas.	YOP maps; identify on site
Mean Annual High-Water Line of River	10’	10’ to boundary of riverfront area	Chemical methods will not be used in Limited Spray Areas.	YOP maps; identify on site
Certified Vernal Pool	10’	10’ to boundary of Certified Vernal Pool Habitat	Chemical methods will not be used in Limited Spray Areas.	YOP maps; identify on site
Inhabited & Agricultural Areas	N/A	0’ to 100’	Chemical methods will not be used in Limited Spray Areas.	Identify on site

*Only non-chemical vegetation management methods may be used within no-spray areas.

** Includes Estimated Habitats of Rare Wildlife and Priority Habitats for State-Listed Rare Species as shown on the most recent edition of the Massachusetts Natural Heritage Atlas prepared by the NHESP (https://www.mass.gov/service-details/regulatory-maps-priority-estimated-habitats).

VIII. Operational Guidelines for Applicators Relative to Herbicide Use

Regulatory Restrictions

- Follow the restrictions of all applicable state and federal regulations
- Follow the guidelines and requirements in this VMP and the YOPs
- Pesticide applicators must hold a valid pesticide license from the MDAR
- All application crews must be supervised by an individual with a Category 40 pesticide license
- Applicators will keep appropriate records according to state and federal regulations, which, at a minimum, include:
    - Date, name, and address of vegetation management contractor(s)
    - Identification of site or work area
    - List of crew members
    - Type of equipment and hours used, both mechanical and chemical
    - Method of application and description of target vegetation
    - Amount, concentration, product name of herbicide(s), adjuvants, and dilutants (EPA registration numbers must be on file)
    - Notation of any unusual conditions or incidents, including public inquiries
- Foliar treatment will not be made to target vegetation exceeding twelve feet in height

Weather

- To minimize off-target herbicide movement during precipitation events, the applicator will comply with the following restrictions:

- No herbicide application will be made during periods of moderate or heavy rainfall.
- Foliar applications can be made effectively in light mist conditions, but any precipitation which creates leaf runoff will move herbicide off-target and render the application less effective on target plants. If foliar applications are interrupted by unexpected rainfall, treatment will immediately stop and will not resume until the rain ends and active leaf runoff has ceased.
- Likewise, cut stump treatments will not be conducted during measurable precipitation events. If cut stump treatments are interrupted by unexpected rainfall, treatment will immediately stop and will not resume until precipitation has ceased.

- To minimize off-target drift during foliar applications, the applicator will comply with the following restrictions:
  - The applicator will continuously observe the application of foliar treatment to ensure that there is no significant movement of the herbicide off target. If the applicator notices herbicide moving off target, application will immediately stop and will not resume until the wind has subsided enough to permit further applications.
  - Herbicide solutions to be used for foliar treatments will contain drift-retardant agents. Drift-retardant agents will be added to the herbicide solutions as per the drift-retardant agent label. In moderate wind conditions, more drift-retardant agent may be added as per label instructions and at the discretion of the applicator to control increased drift.

Equipment Calibration

- Foliar application equipment will be calibrated at the start of the application season and as necessary during the season with changes to chemical mixes, treatment types, spray wands/tips, and prior to touch-up treatment(s). Calibration will be conducted 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.
- Cut stump treatment squirt bottle applicators or hand pump sprayers will be adjusted to deliver the herbicide solution to the target zone with a minimum of splash or overspray.

Sensitive Area Restrictions

- Within the sensitive areas laid out in 333 CMR 11.04 there exist no-spray areas, in which no herbicide application is permitted, and limited spray areas, in which herbicide application is permitted under certain conditions. In limited spray areas, only the minimum labeled rate of application for the management of target species can be applied.

General Guidelines

- All mixing and loading of herbicides will be conducted at the facility where the herbicides are stored.
- Proper personal protective equipment (PPE) will be worn according to the product label(s).
- Mix only the estimated amount of herbicide necessary to carry out vegetation management, based on monitoring results, to ensure there will be minimal waste and avoid potential storage or disposal problems.
- Vehicles carrying spray operations will be equipped with appropriate spill kits, including a bag of adsorbent material and/or activated charcoal, leak-proof containers, a broom, and a shovel.
- A clipboard log of the herbicides on the vehicle will be kept with the vehicle.
- Herbicide labels, material safety data sheets, the VMP, and the current YOP will be kept on site at all herbicide applications.

IX. Alternative Land Use Provisions

The Town of Acton does not currently offer any alternative land use provisions except where abutters to the ROW maintain their own vegetation. Since these areas are typically located in downtown or suburban neighborhoods, there is no need for alternative land use provisions. For example, abutters to the ROW commonly mow and maintain road shoulders. In this case, the pre-treatment monitoring program would reveal that the area does not require additional vegetation management. However, every effort will be given to provide alternative land use provisions should they be warranted. All alternative land use options considered must manage nuisance vegetation in a similar manner to that described in this VMP and be as environmentally conscious, safe, and effective as the methods in the VMP.

X. Remedial Plan to Address Spills and Related Accidents

While education and attention will be directed toward spill and accident prevention, in the event of a spill, immediate action will be taken to contain the spill and protect the spill area. Until completely remediated, the spill area will be protected by the placement of barriers and by the delineation of the spill area by crew members. If a fire is involved, care will be taken to avoid breathing fumes from 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 which will then be removed from the site and disposed of properly. Dry herbicides will be swept or shoveled up and placed in leak-proof

containers for removal and disposal. When applicable, contaminated soil will also be placed in leak-proof containers, removed from the site, and disposed of properly. When warranted, activated charcoal will be incorporated into the soil at the spill site as per label instructions to inactivate any remaining herbicide residue. Reportable spills will be reported to the MDAR Pesticide Division. Chemical spills which require action include, but are not limited to herbicides, bar and chain oil, motor and hydraulic oil/fluids, diesel fuel, gasoline, and Title 3 hazmat materials.

Major spills will be handled similarly to minor spills, except in cases where the spill cannot be contained or removed by the crew. In this case, the DEP Emergency Response Section and the MDAR Division of Crop & Pest Services must be contacted. The DEP will be contacted when there is a spill of a reportable quantity, regardless of major or minor spill status, and in accordance with 310 CMR 40.0000, Massachusetts Contingency Plan. Emergency first responders (included, but not limited to fire and police) should be immediately notified of a major spill or any size incident deemed a potential risk to public health, safety, and the environment.

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

- Herbicide label(s)
- Herbicide material safety data sheet(s)
- Herbicide manufacturers

Table 3. Herbicide Manufacturer Phone Numbers

Manufacturer	Telephone Number	Special Instructions
Corteva	(800) 992-5994	
Dupont	(800) 441-3637	
Bayer	(866) 992-2937	
NuFarm	(877) 325-1840	Medical emergencies
Monterey Lawn and Garden	(559) 499-2100	

- State agencies

Table 4. State Agency Phone Numbers

State Agency	Telephone Number	Special Instructions
MDAR Division of Crop and Pest Services, Pesticide Program	(617) 626-1776	
Massachusetts Department of Environmental Protection, Emergency Response Section	(888) 304-1133	For emergencies involving reportable quantities of hazardous materials. Required info: city/town, street address, site name, material
Massachusetts Department of Public Health, Bureau of Climate and Environmental Health	(617) 624-5757	
Massachusetts Department of Transportation, District 3	(857) 368-3000	Open Monday through Friday, 9:00am-5:00pm

- Emergency services

Table 5. Emergency Services Phone Numbers

Emergency Service	Telephone Number	Special Instructions
Acton Fire Department	911 (978) 929-7722	
Acton Police Department	911 (978) 929-7711	
ChemTrec	(800) 262-8200	
Massachusetts Poison Control Center	(800) 222-1222	24-hour hotline for medical emergencies involving suspected or known pesticide poisoning symptoms

- National Resources

Table 6. National Resources Phone Numbers

National Resource	Telephone Number	Special Instructions
National Pesticide Information Center	(800) 858-7378	Open 11:00am–3:00pm EST Online at www.npic.orst.edu
National Animal Poison Control Center	(888) 426-4435	24-hour hotline for suspected or known pesticide poisoning symptoms in animals

- Town and Local Contacts

Table 7. Town and Local Contacts Phone Numbers

Local Contact	Telephone Number	Special Instructions
Town of Acton Trees and Grounds Division	(978) 929-7743	
Town of Acton Health Department	(978) 929-6632	
Town of Acton Conservation Department	(978) 929-6634	
Acton Water District	(978) 263-9107	24 hour dispatch
Concord Water Department	(978) 318-3250	For spills affecting Lake Nagog and associated waterways
Acton Department of Public Works	(978) 929-7740	

XI. Qualifications of Individuals Supervising, Developing, and Submitting Vegetation Management Plan

Individual Supervising the VMP:

Ryan Hunt
Tree Warden
Trees and Grounds Division
The Town of Acton
14 Forest Road
Acton, Massachusetts 01720
(978) 929-7740

Ryan Hunt is a Massachusetts Qualified Tree Warden working for the Town of Acton. He is an International Society of Arboriculture (ISA) Certified Arborist and Tree Risk Assessment Qualified (NE-6909A) and is a Massachusetts Licensed Commercial Pesticide Applicator (CC-0039000).

Individual Developing and Writing the VMP:

Elise LeBlanc
Urban Forestry Consultant
Davey Resource Group
3 Industrial Drive
Shrewsbury, Massachusetts 01545

Ms. LeBlanc holds a B.S. in Environmental Science from the University of Massachusetts in Amherst, MA. She has worked full-time for Davey Resource Group since 2011 on a variety of projects including invasive species management programs, pesticide application programs, and urban forest resource management. She is a Massachusetts Certified Arborist (#2477), an International Society of Arboriculture (ISA) Certified Arborist and Tree Risk Assessment Qualified (NE-6881A) and is a Massachusetts Licensed Commercial Pesticide Applicator (CC-0041870).