

Yearly Operational Plan City of Leominster, MA 2023



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Table of Contents

Title	Page
Introduction.....	1
Identification of Target Vegetation	2
Vegetation Management Methods to Minimize Herbicide Use	2
Identification of Sensitive Areas	5
Monitoring Plan.....	7
Remedial Plan to Address Spills and Related Accidents	7
Notification Procedures.....	8

Tables

Table A. Summary of Control Methods	4
Table B. Sensitive Area Restrictions	6

Appendices

City of Leominster 5-Year VMP Approval Notice.....	A
City of Leominster Map Identifying Municipal ROWs for application.....	B

Introduction

The purpose of this Yearly Operational Plan (YOP) for calendar year 2023 is to describe the detailed vegetation management operation consistent with the terms of the City of Leominster's 2022-2026 5-Year Vegetation Management Plan (VMP) in accordance with the Massachusetts Department of Agricultural Resources' (MDAR) Rights-of-Way Management Regulations 333 CMR 11.00.

Vegetation maintenance is necessary along public Rights-of-Ways (ROWs), including streets, sidewalks, bike paths, and trails in order to control unwanted vegetation that may pose a public nuisance, result in safety hazards, or cause damage to structures and infrastructure. The City of Leominster will control undesirable vegetation that grows within cracks in asphalt, between sidewalks and adjacent curbing, along curbing, along guardrails, within and around traffic islands, and wherever vegetation is causing a public hazard within City owned ROWs.

Overall, this YOP will detail procedures for vegetation maintenance along approximately 50 miles of municipal ROWs and outline the measures the City will take to minimize the impacts of herbicide use throughout the City. Only herbicides listed on the current ROW Sensitive Areas Materials List will be used. All applications will be done by licensed applicators being supervised by an individual with a Category 40 Commercial Core Applicator license. in compliance with 333 CMR 11.00.

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Company Performing Herbicide Treatments

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The City of Leominster Department of Public Works employee that holds a Category 40 pesticide certification through the Massachusetts Department of Agricultural Resources in compliance with 333 CMR 11.00 will be on site at all time to oversee all herbicide treatments of municipal ROWs.

Herbicides Proposed

Roundup QuikPRO Herbicide. EPA#524-535
Snapshot 2.5 TG Specialty Herbicide. EPA#62719-175
Crew Specialty Herbicide. EPA#62719-742

Identification of Target Vegetation

This plan will group target vegetation into the four categories as follows:

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

Nuisance vegetation – Generally included poisonous and noxious plant species that could cause problems to the general public, City employees, and private contractors. Nuisance vegetation poses a risk to safety and health often due to dermal contact with plants that are poisonous, thorny, or densely colonized. Target vegetation in this category is primarily Poison Ivy, but other nuisance vegetation within 10 feet of the edge of pavement will also be targeted.

Detrimental vegetation – Includes grasses and woody plants that are destructive and may compromise the function of infrastructure by growing in cracks along the roadway, sidewalks, pavement/bridge joints, medians/traffic islands, storm water conveyances, trails, and bike paths.

Invasive species – 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. Any vegetation listed on the MDAR Massachusetts Prohibited Plant List shall be included in this category.

Vegetation Management Methods to Minimize Herbicide Use

Vegetation management methods will include the following types of control methods to limit the amount of herbicide application:

- Cultural Control – Use of ground cover and sustainable landscape methods.
- Physical Control – Street sweeping, crack sealing, and repaving.
- Mechanical Control – Hand cutting, mowing, and selective trimming.
- Chemical Control – Foliar herbicide treatments and cut stump surface treatment.

The proper control methods to treat an area will be selected based on a variety of factors with the goal to achieve a long-term and low maintenance vegetation management program.

Cultural Control

Cultural control methods rely primarily on the use of groundcover where appropriate. These include the use of vegetative groundcovers that can help outcompete and/or crowd out target vegetation.

Physical Control

Physical control methods will rely primarily on pavement maintenance, which will consist of sealing cracks, street sweeping, and other general ROW repairs including repaving and installing new sidewalks. This helps to eliminate weeds by preventing access to sun, soil, and the build-up of sediment and other material that can provide a medium for plant growth.

Mechanical Control – Methods may include hand cutting, mowing and/or selective trimming.

Hand cutting – Consists of the mechanical cutting of target species using chain saws and brush saws. Target species are cut as close to the ground as practical. Hand cutting is used in order to protect environmentally sensitive sites. It is also used on target vegetation 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 practiced at any time during the year.

Mowing – Consists of the mechanical cutting of target vegetation using push mowers, large rider mowers, rear deck mowers, brush mowers, edgers and line trimmers. Selection of specific equipment is based on terrain, target vegetation size and equipment availability. Mowing will be used in areas where terrain and target stem size permit safe and efficient use of the above machinery. Mowing will be the principal method for vegetation control along road shoulders and where herbicide use is prohibited. Mowing will be conducted seasonally when weather conditions allow.

Selective Trimming – Consists of the mechanical pruning of the tops of encroaching limbs of tall trees that may hamper roadway, sidewalk, trail and bike path access. Trimming will be accomplished using aerial lifts via trucks or tractors, or if terrain or obstruction prevents equipment access, by climbing crews.

Chemical Control

Chemical control may include foliar treatment and/or cut stump surface treatments.

Foliar Treatment – Involves the selective application of an herbicide diluted in accordance with manufacturers' directions, to the foliage. 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. Motorized application equipment may be used for foliar treatment on areas where the vegetation density is high and the use of a backpack spray may not be as effective.

These foliar applications will take place when plants are in full leaf and actively growing, and in accordance with the product label. Foliar treatments are an effective and efficient method to control the whole target plant. Controlling the whole target plant reduces the potential of resprout from live root systems.

Cut Stump Surface Treatment – Consist of mechanical cutting of target species using chain saws, and followed by herbicide treatment applied with a squirt bottle, a hand pump sprayer, or painted on the freshly cut surface of the stump. The cutting procedure is identical to that outlined in the Hand Cutting section of this VMP. Cut stump application can be effective during the dormant period, however, it may not be effective during times of sap flow (i.e., maple and birches during the months of February through early April), as flowing sap will limit the herbicide from being absorbed into the stump down to the roots. Certain types of herbicide formulations are limited to freshly cut stumps to be effective.

Control Tactics

The decision to use one or a combination of vegetation control techniques will depend on the site-specific situation. The control tactics selected will control target vegetation in the most environmentally sensitive and efficient manner.

Table A: Summary of Control Methods						
Control Method/Target Vegetation	Grasses	Low-Growth Nonpoisonous¹	Low-Growth Poisonous¹	Tall Growth Nonpoisonous²	Tall Growth Poisonous²	Conditions
Sustainable Landscape	X	X				Where landscape, traffic, and safety conditions allow.
Mechanical – Hand Cutting		X		X		Where landscape prevents mowing; individual trees or branches.
Mechanical - Mowing	X	X				Where landscape, traffic, and safety conditions allow.
Chemical – Foliar³		X	X			Within cracks or joints; woody stems on roadway shoulder; when mechanical methods pose risk to workers safety
Chemical – Cut-Stump³				X	X	Growth is persistent and invasive in nature.

¹Low Growth – herbaceous growth (generally 3-4' high, grasses, vines, short woody growth)

²Tall Growth – woody vegetation greater than 4' in height

³Except in no-spray areas

Identification of Sensitive Areas

Sensitive areas are defined within 333 CMR 11.00 as areas within ROWs in which public health and environmental concerns warrant special protection to further minimize risks of unreasonable adverse effects of herbicides. These include public groundwater sources, Class A public surface water sources, associated surface water bodies, tributaries, Class B drinking water intakes, private wells, state listed species habitat, wetlands, waters over wetlands, riverfront areas, certified vernal pools, inhabited areas, and agricultural areas. Sensitive areas will be identified through the use of existing data and verified when necessary in the field.

Please note that the City of Leominster works with the Leominster Conservation Commission thus allowing the DPW to conduct Rights-of-Way maintenance and other activities near areas jurisdictional to the City of Leominster Conservation Commission. The City of Leominster DPW has been trained by the Conservation Commission to be cognizant of sensitive areas and how to properly identify methods to best protect them. This is done by utilizing Best Management Practices (BMPs) during maintenance events. The Conservation Agent also works closely with the DPW and takes an active role in identifying potential sensitive areas throughout the City and how to best protect them.

Identification of Treatment Zones

The Leominster Department of Public Works (DPW) will utilize GIS software to identify sensitive areas and mark proposed treatment zones on a YOP basemap. DPW staff will visually survey treatment zones in conjunction with the Conservation Agent where applicable to demarcate any additional sensitive areas not already identified on the VMP basemap. Sensitive areas identified in the field that are not already on the VMP basemap will be added or adjusted as needed. Treatment zones located within sensitive areas will be adjusted according to the Sensitive Areas Restrictions listed in Table B.

Field Verification of Sensitive Areas & Marking of Treatment Zones

Utilizing the aforementioned VMP basemap, Leominster DPW staff will deploy in advance of treatment crews to identify the treatment zones in the field. All treatment zones will then be identified and marked on the sensitive areas maps. Sensitive areas in the vicinity of the treatment zones will be confirmed during this field effort, if possible, and any additional sensitive areas identified in the field or corrections will be applied to the basemap. Treatment zones located within no spray areas will be adjusted according to the Sensitive Areas Restrictions listed in Table B.

Once treatment zones are finalized, DPW staff will mark the stop and start points for each zone. Treatment zones will be identified with orange paint or flagging on the curb, guardrail, or in the roadway at the start and finish of each treatment zone.

Table B: Sensitive Area Restrictions			
Sensitive Area	No Spray Areas	Limited Spray Areas	Where Identified
Wetlands and Water Over Wetlands	Within 10 feet (unless provisions of 333 CMR 11.04(4)(c) are followed)	10 – 100 feet; 12 months must elapse between applications; Selective low pressure, using foliar techniques or cut-stump applications	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 cut-stump applications	YOP Maps and identify on site
Public Ground Water Supply	Within 400 feet (Zone I)	Zone II or IWPA (Interim Wellhead Protection Area which is the Primary Recharge Area); 24 months must elapse between applications; Selective chemical, using foliar techniques or cut-stump applications	YOP Maps
Public Surface Water Supply	Within 100 feet of any Class A public surface water source	100 feet to the outer boundary of the Zone A; 24 months must elapse between Applications; Selective chemical, using foliar techniques 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 chemical, using foliar techniques 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 chemical, 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 chemical, using foliar techniques or cut-stump applications	YOP Maps 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 chemical, using foliar techniques or cut-stump applications	YOP Maps and identify on site
Agricultural and Inhabited Areas	N/A	0 – 100 feet; 12 months must elapse between application; Selective chemical, using foliar techniques or cut-stump applications.	Identify on site

Monitoring

All roadsides will be surveyed prior to any scheduled treatment program. Monitoring will be conducted by foot and/or by vehicle. Monitoring of areas may result from requests from the public. All monitoring records will be maintained by the City.

Record Keeping

A log of areas surveyed will be maintained by the City for future planning and reference. Areas maintained either through physical repair, mechanical or chemical control will be maintained by the City. All herbicide application records will be maintained by the City in accordance with 333 CMR 10.14

Handling, Mixing, and Loading Herbicide Concentrates

All mixing and loading of herbicides will be conducted at the City of Leominster DPW garage facility where the herbicides are stored. If the application is being completed by an outside contractor, the contractor may only load or mix herbicide at their offsite facility or at the designated City facility previously mentioned. Only the amount of herbicide necessary to carry out the vegetation control, based on monitoring results, will be mixed daily to ensure that there will be no waste and will minimize potential complications. 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 event of a minor spill. A log of the current herbicides being transported within the vehicle will be kept readily available within the cab of the vehicle. Herbicide labels and fact sheets will be carried on-site by the applicator.

Remedial Plan to Address Spills and Related Accidents

Spills requiring immediate clean-up action include:

- Herbicides, fuels, oils, and other motor/hydraulic fluids.

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 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 any burning chemicals.

Minor spills of liquid herbicide 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. Minor spills involving dry herbicides, such as granulars, will be swept up or shoveled up directly in leak proof containers, removed from the site and disposed of properly. All contaminated soil will be placed in leak proof containers, removed from the site and disposed of properly. Any minor spill will be reported to (MDAR).

Major spills will be handled in a similar manner as minor spills, except in cases where the spill cannot be contained and/or removed by the crew. In this case, the Massachusetts Department of Agricultural Resources (MassDEP) Emergency Response Unit and MDAR, Division of Crop & Pest Services must be contacted.

Emergency first responders (including, but not limited to, fire and police) should be immediately notified of a major spill and/or any size incident deemed a possible risk to public health, safety and the environment.

MassDEP 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.

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

- Herbicide Label
- Herbicide Safety Data Sheet (SDS)
- DOW (Herbicide Manufacturer).....(800) 331-6451
- DuPont (Herbicide Manufacturer).....(302) 774-1000
- Monsanto/Bayer (Herbicide Manufacturer).....(314) 694-1000
- NuFarm (Herbicide Manufacturer).....(877) 325-1840
- MDAR, Division of Crop & Pest Services.....(617) 626-1782
- Massachusetts DEP Emergency Response.....(888) 304-1133
- Massachusetts DPH Environmental Toxicology Program... (617) 339-8351
- Massachusetts Poison Control Center.....(800) 222-1222
- Leominster Department of Public Works.....(978) 534-7590
- Leominster Fire Department.....(978) 534-7541
- Leominster Police Department.....(978) 534-5411
- Leominster Health Department.....(978) 572-6210
- Chem-Trec.....(800) 262-8200
- National Pesticide Information Center.....(800) 858-7378
- ASPCA Animal Poison Control Center.....(888) 426-4435