Town of Sterling, MA

Vegetation Management Plan (VMP)

2020 to 2025

Summary: This is a draft of a plan to manage Rights-of-Way (ROW) vegetation while minimizing the use of herbicides. This plan has not been approved.

Comments on this report can be submitted to cathieryan@comcast.net.

<<<<Town of Sterling Seal>>>>

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1.0 Background

The Town of Sterling has approximately 120 roads measuring 95 miles of roadways. In addition, there are several miles of sidewalks, bike paths, walking trails as well as several municipally-owned properties and utility rights of way. Rights-of-Way (ROW) is defined as "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"[1].

In Massachusetts, whenever a city, town, utility company or other applicant intends to maintain the ROW using herbicides, they must do so in compliance with the Rights-of-Way Management Regulations (333 CMR 11.00) as specified by the Massachusetts Department of Agricultural Resources (MDAR). The purpose of this regulation is to establish a process to minimize the use of herbicides and their impact on health and environment while allowing for the benefits to public safety and economic costs by the selective use of herbicides. Specifically, this regulation:

- Ensures that an Integrated Pest Management (IPM) approach is used on ROW to reduce or eliminate the need for herbicides.
- If herbicides are needed, this regulation establishes standards, requirements, and procedures to herbicide use to prevent unreasonable risk to public safety and health.
- Allows for public and municipal agency input on potential impacts to environmentally sensitive areas to the use of herbicides.
- Allows for public and municipal reviews of Vegetation Management Plans.

2.0 Purpose

The purpose of this Vegetation Management Plan (VMP) is to establish criteria for the Town of Sterling to control vegetation along Sterling ROW in compliance with regulations. This plan outlines how the town will control unwanted vegetation from becoming a public nuisance, safety hazard, or cause damage to bridges, buildings, sidewalks, and other structures. Furthermore, this plan establishes guidelines to prevent unreasonable risk to humans or the environment by herbicide use.

This VMP will serve as technical guidance for individuals involved in ROW vegetation management and as an accessible source of information for public and municipal officials. It is a five-year plan that works with the Yearly Operational Plan (YOP) which identifies ROW and herbicides that will be used in a specified year and allows for public and municipal review of the VMP and YOP.

[1] 333 CMR 11.02: Definitions.

3.0 Statement of Goals and Objectives

The primary goal of this Vegetation Management Plan (VMP) is to document the five-year plan for the Sterling DPW regarding the procedures for vegetation management within Sterling's ROW. Specific goals of this plan include:

- Control undesirable vegetation.
- Minimize herbicide use.
- Maximize the environmental protection of sensitive areas along ROW.
- Manage vegetation without any adverse effects on public health or the environment.
- Allow for public comment on the VMP and YOP.

The VMP's success will be based upon monitoring and inspection. Criteria for success include:

- Protection of the public health and environment.
- Control of target vegetation.
- Reduction in volume and frequency of herbicide application over time.
- Maintenance of ROW to full width.
- Identify all sensitive areas including drinking water supplies, lakes, ponds, brooks, wetlands, inhabited areas, agricultural areas, state-listed species habitat, and sensitive areas that need separate consideration regarding vegetation management.
- Maintenance of protective buffers surrounding environmentally sensitive areas.
- Ensure vegetation management activities are conducted in a safe, effective, and regulatory-compliant manner.
- Protection of sensitive areas (where herbicide use is not permitted) by hand-cutting, mowing and sweeping.
- To only use herbicides from the "Sensitive Area Material List" approved by the Massachusetts Department of Agricultural Resources (MDAR) and found on the following website:

  https://www.mass.gov/service-details/rights-of-way-sensitive-area-materials-list.

4.0 Identification of Target Vegetation

Target vegetation will be limited to plants that pose a safety hazard, compromise infrastructure, are a public nuisance, or are invasive and can have detrimental effects on natural resources. The Town of Sterling will submit a Yearly Operational Plan (YOP) for Massachusetts Department of Agricultural Resources (MDAR) approval to specify any herbicide(s) to be used, target plant species to treat and detailed locations of ROW to be treated.

Definitions of the types of target vegetation follows:

- **Hazard Vegetation**—poses a risk to public safety and impedes movement along public ways. Can obscure sightlines, obscure signs, obscure vehicular movement, create windfall hazards, and cause winter shading (causing ice/reduced melting). Includes trees, tree limbs, and shrubs.
- **Nuisance Vegetation**—can cause problems because vegetation is usually armed (thorns, spines, prickles), poisonous, poses a health risk, and/or causes dermatitis. Includes poison ivy and other nuisance vegetation within 10 feet of the edge of pavement. It can include grasses if located in pavement cracks, along guardrails and traffic islands, and sidewalks.
- **Detrimental Vegetation**—harms infrastructure by growing in cracks along the roadway, pavement/bridge joints, medians/traffic islands, drainage structures/drainageways, trails, and bike paths. Mostly includes grasses and woody plants.
- **Invasive Vegetation**—harms by colonizing and eliminating biodiversity. Includes vegetation listed on the Massachusetts Prohibited Plant List.

5.0 Vegetation Management Methods and Action to Minimize Herbicide Use

Vegetation management methods will include both non-chemical control and chemical application where necessary. The control methods selected will be chosen based on a variety of factors and with the goal to achieve a long-term, low maintenance vegetation management program.

The non-chemical control methods and actions available for use include cultural control, physical control, mechanical control, monitoring vegetation as well as ongoing record keeping of vegetation. Chemical control involves using herbicides to control undesired grasses, vines, and short woody growth. Description of each control method follows:

Cultural Control—use of groundcover and sustainable landscape techniques. Groundcover is planted to outcompete and/or crowd out target vegetation. Sustainable landscape techniques include encouraging permit applicants to plant native trees, shrubs, wildflowers and grasses and encouraging the use of Low Impact Development (LID) vegetation with native vegetative species.

Physical Control—relies on pavement maintenance consisting of the sealing of cracks, ROW repairs, resurfacing, and installing new sidewalks. This helps to eliminate weeds by preventing access to both sun and soil for growth. The town also completes routine street sweeping 1-2 times per year to reduce the build-up of sediment and other material which can provide a medium for plant growth.

Mechanical Control—Includes hand cutting, mowing, and/or selective trimming.

Hand Cutting

Hand cutting consists of the mechanical cutting of target species using chain saws and brush saws. Target species are cut as close to the ground as practical. Hand cutting is used 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

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

Selective trimming consists of the mechanical pruning of the tops of encroaching limbs of tall trees that may hamper roadway, sidewalk, and 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—includes foliar treatment and/or cut stump surface treatments.

Foliar Treatment

Foliar treatments involve 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. The herbicide solution will be diluted to the lowest labeled rate that will provide effective control of target species. 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. When used according to the town's herbicide application program, 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

Cut stump treatments consist of mechanical cutting of target species using chain saws, 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.

Monitoring—includes surveying ROWs prior to any scheduled treatment program. Monitoring will be conducted by the Sterling DPW or pesticide company on foot and/or by vehicle. Monitoring of areas may result from requests from the public. All monitoring records will be maintained by the Sterling DPW.

Record Keeping— requires the Sterling DPW to keep a log of surveyed areas for future planning and reference. Vegetation areas maintained either through physical repair, mechanical or chemical control will be recorded.

5.1 Deciding on Which Control Method to Use

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:

- **Sustainable Landscaping**—Works best to control grasses, nonpoisonous plants, and low growth plants (under 4 feet) such as vines and short woody where traffic and safety concerns are not an issue.
- **Hand-cutting**—Works best for low-growth nonpoisonous plants and tall growth (over 4 feet) non-poisonous plants where the ROW prevents mowing or where there are undesirable tree branches.
- **Mowing**---Works best to control grasses and non-poisonous plants where traffic and safety concerns are not an issue.
- **Chemical use on foliar plants**—Works best on grasses, low-growth (poisonous and nonpoisonous) plants. This method works well to control vegetation in cracks and joints especially where safety concerns eliminate the use of mechanical methods.
- **Chemical use on cut stump**—Works best on tall growth (nonpoisonous and poisonous) when the plant species is persistent and invasive. This method cannot be used in No-Spray areas.

6.0 Justification of Herbicide Use

This plan focuses on the minimization of herbicide use within ROW. Vegetation management along public ways is necessary to control unwanted vegetation that poses a public nuisance, obstructs views, and creates a traffic or pedestrian hazard. By following the proposed vegetation management methods discussed in this plan, physical and mechanical treatment controls most plants that interfere with traffic, visibility, and safety. Specifically, chemical controls are often the preferred method when:

- **Worker safety is at risk due to the location of the vegetation.** For example, workers attempting to control curbside plants and weeds by pulling them or trimming them can also put a worker in danger from traffic and is generally not effective for long-term control. These areas include, but are not limited to, cracks in asphalt, along guardrails/guiderails, paved traffic islands, sidewalks, and curbs. In these instances, grass can be identified as target vegetation.
- **Vegetation is poisonous and poses a health hazard to workers and public.** Poison ivy, for example, is extremely hazardous to handle, biologically resistant to mechanical removal, and can pose a serious threat to those who are allergic to it.
- **Vegetation cannot be controlled by mowing.** Poison Ivy, for example, grows low to the ground. It also grows along stolons and reproduces both by fine and fibrous rhizomes as well as by berry, 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, up tree trunks, and around guardrails/guiderails, make mechanical control out of the question for safety and economic reasons.
- **Resprouting or regrowth of woody stumps and cut vegetation is ineffective**. Depending upon the species of plant removed and its proximity to other vegetation, woody stumps and cut vegetation can be treated with an herbicide to prevent resprouting, although they often can be removed mechanically.
- **Woody plants and vine-like growth impedes mowing or grows too rapidly to be controlled by mowing.** 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 vine-like 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.
- **Control invasive plants.** Invasive plant control is warranted to promote the growth of a more diverse mix of vegetative species, reduce sedimentation, and improve natural drainage and wildlife habitat. Managing invasive plants 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 can be the effective. Working in conjunction with the Conservation Commission, there may be opportunities to remove invasive material and encourage the growth of native species.

7.0 Identification of Sensitive Areas

Sensitive areas are defined within 333 CMR 11.04 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 the following:

- **Public and private water supplies—**Zone I's, Zone II's, IWPA (Interim Wellhead Protection Areas), Class A Surface Water Sources and tributaries, Class B Drinking Water Intakes, and Private Wells.
- **Surface Waters**—Wetlands, Water Over Wetlands, the Mean Annual High Water Line of a River, the Outer Boundary of a Riverfront Area, and Certified Vernal Pools.
- **Cultural Sites**—Agricultural Areas and Inhabited Areas.
- **Wildlife Areas**—Certified Vernal Pool Habitat and Priority Habitat.

Sensitive areas will be identified through the use of existing data and verified when necessary in the field. See Table 1 on page 12 for more information on sensitive areas restrictions.

7.1 Sensitive Areas Basemap

A sensitive areas basemap is created to identify No-Spray and Limited-Spray areas on ROW in Sterling. There are several readily available sources of information that can be used to develop a draft sensitive areas basemap. These sources include:

- Massachusetts Department of Environmental Protection (MassDEP) Water Supply Maps (1:25,000)
- Aerial Photographs
- MassDEP Wetlands Conservancy Maps (scale 1:1,000)
- Municipal maps and records including those from the Sterling Health Department to identify private water supplies
- Regional Planning Agency maps and records
- U.S. Fish and Wildlife Service National Wetlands Inventory Maps
- Ortho Photo Information – MassDEP (1:5,000)
- Massachusetts Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)
- Available MassGIS maps

7.2 Identification of Treatment Areas

With the draft sensitive areas basemap complete, the Sterling DPW staff will identify and mark the proposed treatment areas on the basemap. Sterling DPW staff will visually survey treatment areas in the field for any additional sensitive areas not already on the basemap. Sensitive areas identified in the field that are not already on the basemap will be added or adjusted as needed. Similarly, treatment areas located within sensitive areas will be adjusted according to the Sensitive Areas Restrictions listed in Table 1. An updated basemap will be developed as part of the YOP process.

7.3 Field Verification of Sensitive Areas and Marking of Treatment Areas

With the draft sensitive areas basemap complete, Sterling DPW staff will deploy in advance of treatment, crews to identify the treatment areas in the field. All treatment areas will be identified and marked on the sensitive area maps. Sensitive areas in the vicinity of the treatment areas will be confirmed during this field effort. Any additional sensitive areas identified in the field or corrections will be applied to the basemap. Treatment areas located within No-Spray areas will be adjusted according to the Sensitive Areas Restrictions listed in Table 1 on page 12.

7.4 Massachusetts Watershed Protection Act (313 CMR 11.00)

The western side of Sterling lies within the area regulated by the Massachusetts Watershed Protection Act (WsPA; 313 CMR 11.00). Administered by the Department of Conservation and Recreation's Division of Water Supply Protection (DCR/DWSP), the WsPA (www.mass.gov/watershed-protection-act) regulates land use and activities within critical areas of the Quabbin Reservoir, Ware River, and Wachusett Reservoir watersheds for the purpose of protecting the quality of the source drinking water supply for 2.5 million people serviced by the Massachusetts Water Resources Authority (MWRA). The WsPA applies only to communities in these three DWSP watersheds. The Town of Sterling contains many tributaries to the Wachusett Reservoir that results in the over half of the town falling within WsPA jurisdiction.

In addition, the eastern part of Sterling has many areas that do not fall under the purview of MWRA but should be protected. These areas include the ROW near East Waushacum Lake, several certified vernal pools located in the northeast of town, as well as the Wekepeke sub-basin (aquifer and brooks).

The following table lists the No-Spray and Limited-Spray areas that can be used to determine which ROWs can be treated with herbicides.

Table 1. Sensitive Area Restrictions (333 CMR 11.04)			
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 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 outer boundary of any Certified Vernal Pool Habitat; 12 months 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 --- Within 10 feet of any tributary or associated surface water body located outside of Zone A --- Within 100 feet of any tributary or associated surface water body located within Zone A of a Class A public surface water source	100 feet to outer boundary of Zone A; 24 months between applications; selective chemical, using foliar techniques or cut-stump applications. --- 10 feet to outer boundary of Zone A; 24 months between applications; selective chemical, using foliar techniques or cut-stump applications.	YOP Maps

	---------- 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 between applications; selective chemical, using foliar techniques or basal or cut-stump applications.	
Private Water Supply	Within 50 feet	50 – 100 feet; 24 months between applications; selective chemical, using foliar techniques or cut-stump applications.	In YOP will list and identify on site
Surface Waters	Within 10 feet from mean annual highwater line	10 feet from mean annual high-water line and outer boundary of Riverfront Area; 12 months 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 between application; selective chemical, using foliar techniques or cut-stump applications.	Identify on site
State-listed Species Habitat	No application within habitat area except in accordance with a YOP approved in writing by the Division of Fisheries and Wildlife.		YOP Maps[1]

1 Includes Estimated Habitats of Rare Wildlife and the Priority Habitats for State-Listed Species as shown on the most recent edition of the Massachusetts Natural Heritage Atlas prepared by the NHESP.

8.0 Operational Guidelines for Applicators Relative to Herbicide Use

The Town of Sterling and its contractors will follow all Local, State, and Federal laws regarding herbicide use. Individuals applying herbicides to ROW must hold a valid Core certification as long as an individual with a Category 40 pesticide certification from the MDAR is physically onsite to supervise. The applicator(s) will be town staff and/or a certified contractor working under the supervision of the Sterling DPW. All applicators and their supervisors will have a copy of this document (VMP) and YOP with them at all times for reference during the herbicide application.

In addition to the applicable rules and regulations, applicators will adhere to the following operational guidelines regarding weather, equipment, calibration, sensitive area restrictions, herbicide disposal and record keeping.

8.1 Weather

Herbicide application will be restricted during certain adverse weather conditions, such as rain, wind, or deep snow. Herbicide applications will not be conducted during periods of rainfall and applicators will follow the rain-free protocol according to labeled directions. If foliar applications are interrupted by unexpected rainfall, the treatment will not resume until the rain ends and active leaf runoff has ceased.

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

- 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 ensure 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.
- Herbicide solution to be used for a foliage application may contain anti-drift agents. Anti-drift agents may be added to the foliage herbicide solutions as per the anti-drift agent label. In moderate wind conditions, as per label recommendations, more anti-drift agent may be added, at the discretion of the applicator to control increased drift.
- Foliar treatment will not be made to target vegetation that exceeds twelve feet in height.

8.2 Equipment Calibration

All equipment used to deliver the herbicide solution will be calibrated to minimize herbicide overspray. Foliar application equipment will be calibrated prior to application and in accordance with manufacturer's recommendations. Applicator nozzles will be adjusted to apply a coarse spray pattern. Pressure at the nozzle of hand-pump sprayers, and air speed and throttles of motorized sprayers will be kept to the minimum setting required to transport the herbicide solution to the tops of each target and penetrate the foliage to the main stem of each target. Cut stump treatment squirt bottle applicators will be adjusted to deliver the herbicide solution in a thin stream to the target zone of the vegetation.

8.3 Sensitive Area Restrictions

In identified sensitive areas, there exists a no-spray area where herbicide use is prohibited and a limited spray area where herbicide use is allowed under certain conditions. In places around sensitive areas where herbicide use is allowed, only the minimum labeled rate of application for the control of target species can be applied.

8.4 Herbicide Disposal

Any surplus herbicide solutions and empty herbicide containers will be disposed of as described on the herbicide manufacturer's label. To reduce herbicide surplus, the applicator should plan to treatment operation to minimize the amount of excess herbicide solution.

8.5 Record Keeping

A Daily Vegetation Management Report will be filed at the end of each day with the DPW personnel supervising the YOP. This report will include the following information:

- Applicator name and pesticide license number
- Weather conditions during application
- Identification of site/work area
- Type of equipment and hours used
- Method of application
- Target vegetation
- Herbicide (amount/concentration used)
- Identification of adjuvants or dilutants and amount/concentration used
- Unusual conditions or incidents noted
- Public inquiries noted
- Recording/verification of sensitive areas
- Lane miles treated
- Total amount of herbicide used
- Employee hours (actual spray hours) vs. total herbicide used

9.0 Qualifications of Individuals Developing and Submitting the Plan

Every effort was made to make this plan as complete and accurate as possible. Much of this plan's accuracy depends upon the veracity of the Massachusetts regulations developed to protect our resources as well as a thorough understanding of vegetation management and herbicide use. Additionally, the accuracy of this report relies on the combined experience of the following individuals and their role:

- ???, Superintendent of the Town of Sterling DPW, responsible for implementing the approved plan
- Gregg Aubin, Sterling Department of Public Works Board member, oversight of Sterling DPW and VMP/YOP content
- Lawrence Favreau, Sterling Department of Public Works Chairperson, oversight of Sterling DPW and VMP/YOP content
- Deane Day, Sterling Department of Public Works, Board member, oversight of Sterling DPW and VMP/YOP content
- Clayton Edwards, Massachusetts DAR, ROW Coordinator/Supervisory Inspector, technical accuracy of content and compliance with 333 CMR 11.00
- Cathie Ryan, Vegetation Management Plan Committee, technical writer
- Blaine Bershad, Vegetation Management Plan Committee, liaison to state and committee boards/co-writer
- Gary Menin, Sterling Board of Health, Board member, oversight of content as it relates to public health
- ???, Conservation Commission, Board member, oversight of content as it relates to conservation of Sterling's natural resources
- Scott Hamilton, Sterling Municipal Light Department, oversight of content as it relates to the utility ROW
- Arden Sonnenberg, Sterling Board of Selectmen, Select Person oversight of content as it relates to the town government

10.0 Integrated Pest Management (IPM) Program

The goal of an Integrated Pest Management program is to minimize the harmful effects of herbicides on people, animals and natural resources. It combines biological and cultural controls with limited use of herbicides.

IPM methods are as follows:

- Uses cultural biological and controls over the use herbicides
- Avoids calendar-based application
- Targets only undesired vegetation and pests while protecting non-target (beneficial) vegetation and pests
- Includes monitoring of vegetation and pests to ensure control instead of elimination

- Requires monitoring and record keeping to track IPM methods and success to determine future plans

11.0 Alternative Land Use Options

Alternative land use regarding ROW can be residential, commercial, industrial, or agricultural. Examples of alternative land use includes homeowner landscaping to the edge of the road, driveways intersecting with roads, water drainage ditches and ????. Every effort will be given to respect alternative land use options when it controls nuisance vegetation so long as the land use is in compliance with environmental and civic regulations.

12.0 Remedial Plan to Address Spills and Related Accidents

To prevent accidents related to herbicide use and spills, the following guidelines will be followed:

- **All mixing and loading of herbicides will be conducted at the facility where the herbicides are stored.** This will be a town facility if the application is completed by a town employee, or offsite, if the application is being completed by an outside contractor. 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 problems. The vehicles carrying out the spray operations will be equipped with a bag of absorbent, activated charcoal, leak-proof containers, and a broom and a shovel, in case of minor spills. A clipboard log of the herbicides on the vehicle will be kept in the vehicle. Herbicide labels and fact sheets will be carried on-site by the applicator.
- **All herbicide applicator crews will have the required spill response equipment.** This equipment includes the current VMP and YOP with Emergency contact list, MSDS (Material Safety Data Sheet), Product Label(s), Product Fact Sheets, appropriate absorbent material, shovel, broom, flagging, leak proof container and heavy-duty plastic bags.
- **Spills requiring action include**: herbicides, fuels, oils, and other motor/hydraulic fluids.
- **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 the MDAR, Division of Crop & Pest Services.

- **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 MassDEP Emergency Response Unit and the 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:

Emergency Contact	**Telephone Number**
Herbicide label	See the current year's YOP for specific herbicides to be used and contact numbers.
Herbicide Safety Data Sheet (SDS)	Same as above
Herbicide manufacturer	DOW (800) 992-5994 Monsanto (314) 694-4000 (617) 551-7200 NuFarm (877) 325-1840 Bayer (866) 99-BAYER (866) 992-2937
MDAR, Division of Crop and Pest Services	Clayton Edwards (617) 626-1700
MA Department of Environmental Protection	Emergency Response (888) 304-1133
MA Department of Public Health, Bureau of Environmental Health	Environmental Toxicology Program (617) 339-8351
MA Poison Control Center	24-hour hotline (800) 222-1222
Town of Sterling Department of Public Works	(978) 422-6767
Town of Sterling Fire Department Non-emergency number	(978) 422-8107
Town of Sterling Police Department Non-emergency number	(978) 422-7331
Town of Sterling Board of Health	(978) 422-8111 ext 2305 or 2306
CHEMTREC	(800) 424-9300
National Pesticide Information Center	(800) 858-7378
National Animal Poison Control Center	(888) 426-4435

13.0 Monitoring the Vegetation Management Plan's Success

On an annual basis, the Sterling DPW will evaluate the success of this Vegetation Management Plan based on the goals and objectives stated in this VMP (Section 2.0) which include:

- Protection of the public and environment
- Control of target vegetation
- Reduction in volume of chemical application
- Reduction in frequency of chemical application
- Ensure vegetation management activities are conducted in a safe, effective, and regulatory compliant manner
- Protection of sensitive areas

This monitoring plan will evaluate the relative success of the VMP. Plan success constitutes achievement of the above goals and objectives. Monitoring plan and assessment activities will include the following:

1. Pre-application assessment of each treatment area to include estimated area of treatment and identification of target species. Treatment areas will be mapped for future assessment.
2. Recording of volume of herbicide used during treatment for each area.
3. Post-evaluation of each treatment area to include a description of the overall control of target species and observation of nearby sensitive resource areas, noting any impacts.
4. The Sterling DPW will hold an annual VMP monitoring meeting in the fall after completion of all herbicide application activities. This meeting will assess the following issues:
    a. Overall control of target species in each treatment area
    b. Volume of herbicide applied
    c. Impacts related to weather
    d. Sensitive area impacts, if any
    e. Comments received from the public
    f. Overall program implementation including suggested changes
5. Meeting minutes will include the above information, data and discussion points and will include comparisons to previous years' information, if available. Recommendations on location and use will be reflected in the next year's YOP as applicable.

14.0 Notification Procedures

Once approved, a copy of the VMP will be provided to the Board of Selectman Chairperson, Board of Health and Conservation Commission. Upon approval of the VMP and YOP and 21-days in advance of the application of herbicide to ROW, the town will notify the Massachusetts Department of Agricultural Resources (MDAR), Board of Health, water supplier, Board of Selectman Chairperson and Conservation Commission of the application. Notification will include:

- method and location of application
- herbicide fact sheet
- U.S. EPA registration number for herbicide
- applicator contact information.

Additionally, at least 48-hours prior to a ROW herbicide application, the Sterling DPW 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 and purpose of application
- Contact information for the designated individual representing the town whom citizens can contact

For more information on notification procedures, see 333 CMR 11.07 (1-3).

Appendix A: Related Documents

Maps of Sterling Sensitive Areas:

To be supplied once the ROW to be treated are identified.

MDAR VMP/YOP Approval:

To be supplied once VMP and YOP approved.

Environmental Monitor Notice:

Below is a link to the Environmental Monitor. The notice will appear in the Environment Monitor at least 45 days prior to treatment.

https://www.mass.gov/service-details/the-environmental-monitor

333 CMR 11.00 Rights-of-Way Management Regulations:

https://www.mass.gov/regulations/333-CMR-11-rights-of-way-management

Appendix B: Timeline and Task Table

The following table describes the timeline, responsible group, and task that need to be performed over the calendar year. The process begins with determining ROW to be treated and ends with the treatment and monitoring of vegetation.

Timeline	Responsible Group	Task
Summer	DPW	Determine which ROW may be treated with herbicides the following summer.
	DPW	Select Pesticide Contractor to perform spraying. At this point, if contracts are needed to be created and signed, do so.
	DPW and/or Pesticide Company	Work together to complete the YOP. Review with and get signatures from Board of Health, Conservation Commission, Select Board, Town Administrator.
9/01	DPW	Submit Sterling VMP/YOP for official review and approval to MDAR. See 333 CMR 11.05 (4) for how to submit.
9/01 to end of review and approval process	MDAR	Reviews the Sterling VMP/YOP, hold public and regional reviews and publishes notice in the Environmental Monitor. If the MDAR requires either the VMP or YOP to be modified or revoked, see 333 CMR 11.08 for the process to follow.
21 days before spraying	DPW	Notify MDAR, Water Department, Board of Health, Conservation Commission, Select Board, Town Administrator by registered mail of intention to spray. See details in 333 CMR 11.07(1)
Summer and within the 10-day spraying window	DPW/Pesticide contractor	DPW and Pesticide contractor follow weather reports and schedule day to spray. (DPW may pretreat small areas to verify that the herbicide is having the desired effect.
At least 48 hours before spraying	DPW	Publish notice in newspapers of intent to spray. See 333 CMR 11.07(3) for more details about notice.
Day before spraying	DPW/Pesticide contractor	Perform a field walk to verify and mark the areas to be sprayed and not sprayed. Private wells and no spray areas must be marked. Notify responsible groups if the maps do not match the field so that those groups can update their maps.
Day of Treatment	Pesticide contractor	Perform treatment. Report any problems as appropriate. Log treatment.
After treatment but before summer/fall is over.	DPW	Monitors the treatment areas to see how successful. Touch-up as needed. Look at other ROWs to determine if treatment is needed in following year. Look for year to year reduction in herbicide use and effectiveness of other vegetation management methods.

Under certain conditions, MDAR may issue a Limited Application Waiver. For more details, see 333 CMR 11.03(14) for more information regarding the waiver process.