

Town of Canton

Department of Public Works



Roadside Vegetation Management Plan

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TABLE OF CONTENTS

PAGE(S) 1

STATEMENT OF OBJECTIVES	2
STANDARDS FOR CERTIFICATION	2
DESCRIPTION OF TARGET VEGETATION	4
INTEGRATED ROADSIDE VEGETATION MANAGEMENT	5
SUMMARY OF CONTROL METHODS	8
JUSTIFICATION OF HERBICIDE USE	9
HERBICIDE APPLICATION METHODS	9
IDENTIFYING AND PROTECTING SENSITIVE/REGULATED AREAS	10
SENSITIVE/REGULATED AREA RESTRICTIONS	11
IDENTIFYING AND PROTECTING SENSITIVE/REGULATED AREAS GUIDE	12
OPERATIONAL GUIDELINES FOR HERBICIDE APPLICATORS	12
MITIGATION MEASURES	13
ALTERNATIVE LAND USE OPTIONS	14
REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS	14
HERBICIDE ALTERNATIVES	15
EVALUATION AND RECOMMENDATIONS	15

STATEMENT OF OBJECTIVES

This Roadside Vegetation Management Plan (RVMP) is intended to establish the criteria whereby the Town of Canton Department of Public Works (DPW) controls vegetation along town roads in compliance with the Environmental Protection Agency (EPA), Connecticut Department of Energy & Environmental Protection (DEEP), and Town of Canton Regulations.

STANDARDS FOR CERTIFICATION

The specific standards from the Federal Register for Right of Way (ROW) category of commercial pesticide applicators are as follows:

“Applicators shall demonstrate practical knowledge of a wide variety of ecosystems, since right-of-ways can traverse many different terrains, including waterways. They shall demonstrate practical knowledge of problems concerning runoff, drift, and excessive foliage destruction and the ability to recognize target pest organisms. They shall also demonstrate practical knowledge of the nature of herbicides and the need for containment of these pesticides within the right-of-way area, and the impact of their application activities in the adjacent areas and communities.”

It is the Environmental Protection Agency’s responsibility to see that minimum standards are met. A lead agency is designated in each state that is responsible to EPA for certification training and enforcement.

All persons using pesticides professionally in Connecticut must possess an up-to-date certificate issued by the Department of Energy and Environmental Protection. Applicants for the right of way certificate are expected to possess a working knowledge of the kinds of operations performed on a right of way and the reasons for performing them. Outlined below are areas in which applicants should be proficient. Each applicant should be able to:

Identify the plants listed below:

- | | |
|----------------------------|-----------------------|
| Ash | Honeysuckle, Japanese |
| Aspen | Ivy, poison |
| Barberry, common | Juniper |
| Birch | Laurel, mountain |
| Blackberries & raspberries | Maples |
| Brier, common green | Oaks |
| Cherry, wild | Pines |
| Creeper, Virginia | Ragweed, common |
| Dogwoods | Ragweed, giant |
| Elderberry | Roses |
| Elms | Sassafras |
| Grapes, wild & cultivated | Sumac |
| Hickory | Willows |
| Honeysuckle, bush | |

Demonstrate a practical knowledge of problems such as runoff, drift, excessive foliage destruction, and general hazards within and outside the right of way;

Demonstrate a practical knowledge of the specialized equipment and application techniques used in right of way pest control; and

Demonstrate a working knowledge of the nature of the herbicides used including but not limited to:

bromacil (Hyvar X)	metasulfuron-methyl (Escort)
chlorsulfuron (Telar)	oryzalin (Surflan)
dicamba (Banvel)	paclobutrazol (Clipper)
Dichlorprop (Weedone 2,4-DP)	picloram (Tordon)
Diuron (Karmex)	prometon (Pramitol)
2,4-D	sodium borate
fosamine (Krenite)	sodium chlorate
glyphosate (Accord, Rodeo, Roundup)	sulfometuron-methyl (Oust)
hexazinone (Velpar)	tebuthiuron (Spike)
imazapyr (Arsenal, Chopper)	triclopyr (Garlon 3a,4)

All DPW staff and/or contracted vendors who apply pesticides in the town right-of-ways will be in compliance with the EPA, DEEP and local regulations.

The primary objective of the RVMP is to provide a safe, unobstructed roadway corridor and preserve the integrity of the town's infrastructure. Management of vegetation is an important element of roadside maintenance for safety and aesthetic purposes. Left uncontrolled, roadside vegetation can impede normal maintenance operations, obstruct motorists' line of vision, threaten pedestrian safety and cause damage to structures such as pavements, guard posts, drainage lines and waterways. Other objectives include development of an aesthetically pleasing roadside, pest control, provisions of habitat, and stabilization of embankments and other areas prone to erosion.

When roadside vegetative growth threatens the safety and comfort of motorists or maintenance personnel, jeopardizes the capital investment in the transportation infrastructure, or endangers environmental quality, the Canton Department of Public Works is charged with the responsibility of initiating vegetation management procedures.

To achieve this, DPW will implement an Integrated Roadside Vegetation Management Program (IRVMP). The key components of this strategy will be to identify priorities for vegetation control, to implement controls in an environmentally sensitive manner, and to monitor success to refine methods and adjust priorities. Controls shall include mechanical, chemical, cultural, biological, and roadside development methods.

Although roadside development is not a control tool readily available to the town maintenance staff, it is included in the departments IRVMP as it has become an efficient, cost effective method of vegetation management implemented as part of road widening/resurfacing/bridge related construction projects. DPW along with other town departments will continue to refine its specifications and construction policies to ensure that the roadside is not only safe for motorists, but also preserves the quality of the roadside environment, and that improvements will minimize demand for operational controls.

It shall be a goal of the IRVMP to minimize the use of chemical controls, through minimizing areas of application, quantity of chemicals, and frequency of applications. Chemical control techniques shall be limited to use on town roads, where safety of motorists and department employees precludes the use of mechanical methods. In addition the IRVMP will actively pursue testing and evaluation of alternative methods of vegetation control.

DPW will monitor and evaluate the success of the program and integrate appropriate new methods into the RVMP and Yearly Operational Plans (YOP).

DESCRIPTION OF TARGET VEGETATION

DPW will inventory town roadways and develop priorities for control of target vegetation. These areas will be mapped and prioritized on the basis of roadway use, speeds, and significance of vegetation conditions. Early identification and timely removal of unwanted species is the easiest, most effective, and least costly method of weed control, both in terms of dollars and environmental impact. From a department operations standpoint, target vegetation along roadways falls into one or more of the following categories: hazard vegetation, detrimental vegetation, nuisance vegetation, and invasive vegetation. From a roadside vegetation management standpoint, target vegetation will be one or more of the following types: annual and perennial grasses and weeds, low-growing woody shrubs and vines, and tall growth (trees). Of these, some target vegetation may be determined to be persistent and invasive, meaning that the vegetation will proliferate and re-sprout when removed by mechanical means.

- ❖ *Hazard Vegetation.* This category represents the primary target material, including vegetation obscuring sightlines, growing over guardrails, creating obstacles to signs or vehicular movement, posing windfall hazard over vehicular or pedestrian ways, or creating winter shade leading to icing conditions. A guardrail that is grown over with weeds, vines, or grass becomes an obstacle obscuring sight lines or causing motorists to veer toward the center of the road. In special instances conifers may present a hazard. In the winter, shadows cast on roadways by conifers can delay melting resulting in possibility of hazardous road conditions and an increase in the amount of de-icing chemicals (road salt) applied.
- ❖ *Detrimental Vegetation:* This category is comprised of grasses and woody plants that are destructive to or compromise the function of roadway structures, including grasses in pavement and bridge joints, and traffic islands, as well as

vegetation growing in and along drainage structures thus compromising drainage ways. The roadway drainage impact of vegetation creates storm water accumulation and hazardous icing conditions.

- ❖ *Nuisance or Noxious Vegetation:* This category includes any vegetation growing along town roadways that could potentially cause problems to the general public and/or town employees or contractors maintaining the ROW. The overwhelming majority of plant material to be controlled in this instance is Poison Ivy (*Toxicodendron radicans*). Poison Ivy and other nuisance vegetation growing within 30 feet of the edge of pavement, bridge abutments, a drainage structure or swale, other structures and appurtenances requiring maintenance, within town ROW, will be considered target vegetation.

- ❖ *Invasive Vegetation:* Some areas of town ROW have become infested with invasive plant species. Invasive vegetation consists typically of introduced plants that have spread from gardens and agricultural areas into the wild, where they pose problems for the natural environment. Not all invasive plants are non-native and not all introduced species become invasive. However, invasive plants are typically non-native and there are no local diseases or pests to control them. They reproduce and spread quickly and thrive in disturbed conditions, outcompeting and displacing native species. This reduces biodiversity, because as the native plants disappear, so also do the insects and animals which depend on them for food and habitat.

Working with input from environmental agencies and academic and technical resource institutions such as the University of Connecticut Extension Service, the department will seek opportunities to remove invasive material and to encourage growth of native species. Specific target invasive plants include but are not limited to Tree of Heaven (*Ailanthus altissima*), Japanese Knotweed (*Polygonum cuspidatum*), Multiflora Rose (*Rosa multiflora*), Oriental Bittersweet (*Celastrus orbiculatus Thunb.*), and Russian Olive (*Eleagnus angustifolia*).

INTEGRATED ROADSIDE VEGETATION MANAGEMENT

Canton Department of Public Work's Integrated Roadside Vegetation Management Program (IRVMP) methods include roadside development and cultural practices (active planting to encourage appropriate competing vegetation, non-organic barriers), mechanical (mowing, hand cutting, selective trimming) and chemical (low volume foliar herbicide treatments and basal or cut-stump treatment.) Each one of these methods has benefits and impacts, and each by itself will not work effectively for long term vegetation management. When these methods are integrated, they complement one another in terms of both effectiveness and minimization of environmental impacts. The methods listed above will be chosen by department personnel familiar with the right of way, based on a variety of factors including, but not limited to, location, environment, terrain, and public/employee safety. The method chosen for a given vegetation problem will attempt to achieve a long term, low maintenance vegetation management program through the encouragement of a stable herbaceous community.

Roadside Development and Cultural Practices

A key aspect of the department's IRVMP is the development of the roadside through town construction projects. DPW and the Canton Land Use Department's goals include the creation of sustainable low-maintenance landscapes that preserve and protect the natural and cultural resources surrounding the roads. Measures to be implemented include:

- ❖ Consistent with the Town of Canton Land Use Department goals, DPW will pursue options for reducing mowing frequency as an economic way of establishing naturalized roadside environments, while meeting operational safety requirements.
- ❖ DPW will refine seeding and planting specifications with a goal of establishing self-sustaining/low maintenance plantings.
- ❖ Working with University of Connecticut Extension Service and other agencies, DPW has eliminated the use of invasive species for roadside planting.
- ❖ Where feasible DPW will use native plant species to encourage biodiversity.
- ❖ Where consistent with Federal and State regulations and Town of Canton policy, DPW will allow private abutters to maintain roadside vegetation using mechanical means only.

In addition to these landscape strategies, the department remains committed to pursuing technological developments that will lead to reduced control requirements. These may include:

- ❖ Use of under-guardrail mulches, mulch mats, and other weed barriers.
- ❖ Exploration of appropriate sealants and other strategies to reduce vegetation establishment in pavements and roadway structures.

Mechanical

- ❖ Mowing
- ❖ Hand Cutting
- ❖ Selective Trimming

Each method of vegetation removal has costs and benefits. The cost of mechanical methods is the amount of labor and time involved, which often includes repeated efforts throughout the growing season to achieve effective control of aggressive species and to prevent their reestablishment. The benefits of these methods are that they incur minimal damage to desirable plants, the site, and surrounding ecosystems. There is no threat of toxic impacts to abutters, residents, laborers, animals, or the environment. The combined costs of equipment, tools, and time and labor tend to be high for this method of roadside vegetation management.

Mowing: is the principal vegetation control method employed by the department. Mowing consists of the seasonal, mechanical cutting of target vegetation using machines. DPW utilizes several types and sizes of mowers including, articulated boom tractor mowers, zero-turn ride-on lawn mowers, walk-behind mowers and line trimmers (weed whackers). Selection of specific equipment is based on terrain, target vegetation size and equipment availability. Mowing will be utilized in areas where terrain and target stem size permit safe and efficient use of the equipment.

Hand cutting: consists of the mechanical cutting of target species using chain saws and brush clearing saws. Target species are cut as close to the ground as practical with stump heights usually not exceeding three inches. Hand cutting is used in order to protect environmentally sensitive sites. It is also used on target vegetation greater than four feet tall where herbicide use is prohibited or on non-sprouting conifer species greater than six feet in height. Hand cutting is used on those restricted sites where terrain, site size or sensitivity renders mowing impossible or impractical. This method may be practiced at any time of the year.

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

Chemical

- ❖ Foliar Treatment
- ❖ Stem Treatment (Cut Stump, Basal)

Canton Department of Public Works is committed to minimizing its use of chemicals for vegetation control. Chemical herbicides shall be limited to use on town roads, where safety of motorists and department employees precludes the use of mechanical methods. There are three methods of herbicide application that may be utilized by DPW, foliar treatment, cut stump surface treatment, and basal applications.

Foliar Treatment: is the application of herbicides to fully developed leaves, stems, or blades of a plant. The herbicide is mixed or diluted with water and a drift control agent and surfactant and applied as a uniform spray over the entire foliage of the plant. This is generally the most effective and economical method, particularly in areas where mechanical methods preclude the safe placement of men and equipment. It is also the best technique to control noxious and poisonous vegetation that presents a public safety hazard to pedestrians, and maintenance crews.

The department will utilize post-emergent, low volume, low pressure foliar treatment herbicide applications only. All herbicides used by DPW, have been researched, tested, and approved for use by the Connecticut Department of Energy & Environmental Protection (DEEP); application of herbicides to sensitive/regulated areas and bare ground shall be avoided.

Stem Treatment: is any technique including, but not limited to stump, basal, stem, injection, banding, frill, or girdle and any other technique which delivers herbicide at low pressure to the stump, base or stem of the target vegetation. Ideally, treatment should be made to freshly cut stumps or live stems, and avoided during the season of high sap flow. This method is often not practical in moderate or heavy stem densities but offers the opportunity to chemically treat undesirable vegetation in sensitive or difficult to access sites where other methods are not possible.

When used in concert with mechanical components of an IRVMP, herbicides can support the establishment of low-growing, favorable plant communities. Used properly, herbicides are the most effective and environmentally sound means for preventing the re-growth of target vegetation. Chemical controls are, therefore, an integral part of an IRVMP and the selective and judicious use of herbicides is critical in the effective management of undesirable vegetation along town roadways.

SUMMARY OF CONTROL METHODS

TARGET *	CONDITIONS	CONTROL METHODS
Grasses And Low Growth	- Where terrain and traffic conditions allow	Mechanical (mowing)
	- Under guardrail; or - Pavement cracks; or - Joints where traffic volumes and speeds pose a hazard to motorists and DPW employees	Chemical (low volume foliar treatment)
Low Growth	- Terrain allows, and - Species are not persistent or invasive	Mechanical (mowing)
	- Terrain prevents mowing, and - Species are not persistent or invasive	Mechanical (hand cutting)
	- Terrain prevents mowing, and - Species are persistent and invasive	Chemical (low volume foliar treatment)
	- Poison ivy that is - in ROW, and - within thirty (30) feet of pavement, or any DPW structure	Chemical (low volume foliar treatment)
Tall Growth	- Individual trees or branches	Mechanical (selective trimming)
	- Plants >12 feet high; or - Terrain too steep; and - Species are not persistent or invasive	Mechanical (hand cutting)
	- Plants >12 feet high; and - Species are persistent and invasive	Chemical (cut stump, stem/basal treatment)

***Target vegetation shall include hazardous, detrimental, nuisance, or invasive vegetation, as determined by DPW personnel.**

JUSTIFICATION OF HERBICIDE USE

The long-term goal for every RVMP, Canton Department of Public Works or other, is to reduce the need for vegetation management. DPW will implement an integrated approach to vegetation management by encouraging plant communities that hinder the development of target vegetation. This program will utilize roadside development, mechanical and chemical methods to control vegetation and will address public, environmental, employee safety and economic concerns by minimizing the applications of and reliance on herbicides.

To date, there is no environmentally, economically feasible, and safe ROW management program that eliminates the use of herbicides altogether. In particular, guardrails, medians, and traffic islands on high volume town roads present conditions unsafe for hand-cutting and mowing operations. Many of the species growing in these conditions are invasive and persistent, and cannot be adequately controlled without chemical treatment. Nuisance plants, Poison Ivy in particular, are not only invasive and persistent, but present a potential health hazard to mechanical equipment operators, as well as the general public.

In addition, under certain conditions, DPW may also use herbicides to remove persistent invasive vegetation as part of a larger effort to establish sustainable and/or native species.

Consequently, public and occupational safety considerations require judicious use of chemical controls.

HERBICIDE APPLICATION METHODS

Department of Public Works will utilize two methods of herbicide application, foliar treatment and cut stump/basal stem treatment.

Chemical foliar treatments involve the selective application of approved herbicides and adjuvant diluted in water, to the foliage and stems of the target vegetation. The foliar treatment used shall be low pressure, below 60 psi at the nozzle, with a normal working pressure of 40 psi for application at volumes of less than 50 gallons/acre.

Low pressure nozzles will be used to produce the largest possible droplet size and a drift control agent shall be added at the rate recommended on the label to keep spray drift to an absolute minimum. Experience indicates minimal drift occurs when using low-pressure applications with drift control agent.

To control vegetation beneath and immediately adjacent to guardrail, a low-pressure foliar treatment shall be applied using a tractor mounted spray boom, attached to the right side of the unit. In addition, a separate handgun equipped with a low pressure nozzle and adequate length of hose may be used for low-pressure and low-volume spot treatments of

target vegetation growing in pavement, traffic island joints, around bridge structures, drainage structures, sign posts and other structures and appurtenances.

The herbicide solution is applied to lightly wet the target plant. This technique has few limitations with the exception of reduced effectiveness on tall, high-density target vegetation and will not be used on vegetation over twelve feet in height. This type of vegetation will be controlled using mechanical methods followed by an application of an approved herbicide with a portable pressurized canister or manually painted on the freshly cut surface of the remaining stump (Cut Stump Surface Treatment or Stem Treatment).

Low-pressure foliage applications will take place when plants are in full leaf and actively growing, and in accordance with the product labels.

IDENTIFYING AND PROTECTING SENSITIVE/REGULATED AREAS

Sensitive/regulated areas are defined as areas within rights of way in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects (of herbicides) and include public groundwater supplies, public surface water supplies, private drinking water supplies, surface waters, wetlands, rivers, inhabited areas and agricultural areas. For the purpose of identification, sensitive/regulated areas can be separated into two categories: areas that are and are not readily identifiable in the field. A significant amount of research and field-work is applied to locating and delineating sensitive/regulated areas.

Sensitive/regulated areas that are not readily identifiable in the field include public groundwater supplies, private water supplies and public surface water supplies. Sources available to identify these areas include:

- ❖ Connecticut DEEP Inland Wetlands Maps - Town of Canton GIS V Maps
- ❖ Connecticut DEEP Aquifer Protection Map
- ❖ Municipal maps and records – Official Inland Wetlands and Watercourses Map of the Town of Canton
- ❖ U.S. Fish and Wildlife Service National Wetlands Inventory Maps, available from USFWS National Wetlands Inventory
- ❖ Identification of public and private well locations from the Farmington Valley Health District
- ❖ Connecticut Department of Public Health Public Water Supply Map
- ❖ Natural Heritage and Endangered Species Program
- ❖ Connecticut DEEP In-Land Fisheries

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

- ❖ Consult Town of Canton GIS State of Connecticut Inland Wetlands Map along with Official Inland Wetlands and Watercourses Map of the Town of Canton to

locate any of these sensitive/regulated areas that may already be identified on these maps.

- ❖ Prior to commencement of herbicide application operations, the treatment crew will be provided the marked topographic maps and detailed spray sketches.
- ❖ The treatment crew will visually survey the area to be treated for any additional sensitive areas (e.g. catch basins with or drainage ditches with standing water not shown on plans) as well as areas where the ground is bare or has limited re-growth from previous herbicide applications.

The following is a description of how the sensitive/regulated areas will be identified for required protection:

- ❖ Consult the appropriate reference materials and sources to determine the precise location of these areas.
- ❖ DPW will inventory town roadways and identify all guardrails, signage, medians and traffic islands using Global Positioning System (GPS).
- ❖ DPW will then overlay the Town of Canton GIS State of Connecticut Inland Wetlands Map along with Official Inland Wetlands and Watercourses Map of the Town of Canton. Once the sensitive/regulated area is determined, DPW will physically mark each area to be a No-Spray Zone.
- ❖ Prior to commencement of herbicide application operations, DPW personnel will install permanent color-coded plastic delineators to mark the boundaries of the spray and no spray zones. In addition, the treatment crew will be provided with a copy of the Yearly Operational Plan (YOP), the marked up topographic map, and GPS sketch drawings with which to identify the boundaries of these sensitive areas.
- ❖ DPW will deploy a qualified point person in advance of the main herbicide application operation to identify the delineation markers and boundaries of the appropriate buffer zone. This information is then transmitted in advance to the treatment crew via two-way radio. This communication insures that only the appropriate areas are treated and minimizes the chance of mistakes.
- ❖ DPW will give written notice before commencement of herbicide application operations to residents utilizing the town website and other social media.

SENSITIVE/REGULATED AREA RESTRICTIONS

Sensitive/regulated areas are defined as areas within rights of way in which public health, environmental, or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects (of herbicides).

Note: Canton Department of Public Works herbicide applications is limited to low pressure foliar techniques or cut-stump applications only.

IDENTIFYING AND PROTECTING SENSITIVE/REGULATED AREAS GUIDE

Sensitive/Regulated Area	No-Spray Zone	Where Identified
Wetlands and Water over Wetlands	100 feet measured horizontally from Sensitive/Regulated Area	RVMP, YOP Maps and Identify on Site
Certified Vernal Pool	100 feet measured horizontally from Sensitive/Regulated Area	RVMP, YOP Maps and Identify on Site.
Public/Private Ground Water Supply	100 feet measured horizontally from Sensitive/Regulated Area	RVMP, YOP Maps and Identify on Site
Surface Waters	100 feet measured horizontally from Sensitive/Regulated Area	RVMP, YOP Maps and Identify on Site
Agricultural Areas	100 feet measured horizontally from Sensitive/Regulated Area	RVMP, YOP Maps and Identify on Site
Public Surface Water Supply	100 feet measured horizontally from Sensitive/Regulated Area	RVMP, YOP Maps and Identify on Site

OPERATIONAL GUIDELINES FOR HERBICIDE APPLICATORS

As required by regulation, applicators to roadside rights of way must hold a valid pesticide certification from the Connecticut Department of Energy & Environmental Protection (DEEP). In addition to the applicable rules and regulations, applicators will adhere to the following operational guidelines:

Weather: Herbicide application will be restricted during certain adverse weather conditions, such as rain or wind. Herbicide applications will not be made during periods of moderate or heavy rainfall. Foliar applications are effective in light mist situations however; any measurable rainfall that creates leaf runoff will wash the herbicide off the target plant. If foliar applications are interrupted by unexpected rainfall, the treatment will not resume until the rain ends and active leaf runoff has ceased.

Excessive wind can create drift during foliage applications causing damage to desirable vegetation. To minimize off target drift, the applicator will comply with the following restrictions:

- ❖ The applicator will monitor wind conditions to insure that there is no significant movement of the herbicide. If the applicator can see the herbicide moving off target, the application will immediately stop until the wind has subsided enough to permit further application.
- ❖ All herbicide solutions to be used for a foliar application will contain anti-drift agents. Anti-drift agents will 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 treatments will not be made to target vegetation that exceeds approximately twelve feet in height.

Equipment Calibration: Low-pressure foliar application equipment will be calibrated to maintain pressure not exceeding 60 pounds per square inch at the nozzle. The equipment will be calibrated and a Spray Controller will be used to deliver a consistent flow rate of approximately 40 gallons/Acre.

For application to guardrail areas, a series of two (2) low pressure nozzles shall be properly mounted on a boom, spaced to overlap 30 to 50%. The spray pattern will be a narrow oval with lighter edges and, at a normal working pressure of 40 psi, will produce small to medium droplets. The boom will be kept as low as possible to reduce the drift hazard and a drift control additive will be included in the spray formulation to increase droplet size and give a uniform distribution of spray material. Throttles will be kept to the minimum setting required to transport herbicide solution to the tops of each target plant and penetrate the foliage to the main stem of the target plant.

MITIGATION MEASURES

Monitoring and Record Keeping an inventory of all roadsides will be taken, with information on the prevailing type of vegetation, terrain, roadway condition and current maintenance practice included. Research identifying which treatment(s) promotes the goals of the program will follow. The decision to use one of the vegetation control techniques described above will depend on evaluating the specific situation. The goal of the control method will be to establish an easily maintainable and stable plant population that will not interfere with vehicles or pedestrians. Emphasis will be given to the control method that will address the vegetation problem in the most environmentally sound manner and in a way to minimize vegetation control in the long term.

Monitoring will include project record keeping to maintain timely information on the nature, timing, and location of actions taken, including project location, weather conditions, miles completed, amount of material used, staff and equipment hours devoted to the project, persons responsible for activity and follow-up evaluation. Chemically treated areas shall be monitored after the necessary translocation period of the herbicide to determine the effectiveness of the applications and to monitor any off target injury and migration of the spray solution.

Canton Department of Public Works under the direction of Director of Public Works, Robert J. Martin, will conduct training for staff in methods of vegetation management, employee safety and record keeping.

ALTERNATIVE LAND USE OPTIONS

Canton Department of Public Works will review and evaluate new and innovative alternative land uses within its ROW. However, specific criteria must be met for adoption of alternative land use options. The alternative land use option must control the undesirable vegetation in a similar manner, ecologically and efficiently as allowed in this integrated roadside vegetation management plan (IRVMP). For example, a common practice of abutters to roadways is to mow and maintain road shoulders. In this instance, the monitoring program would reveal that the area does not warrant vegetation control.

REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS

All mixing and loading of herbicides will occur at the department facility in amounts of herbicide necessary to carry out that day's work. This will minimize waste and the need of excess handling. The spray vehicle will be equipped with a clipboard log of the herbicides on board, a bag of adsorbent, activated charcoal, plastic bats, a broom and a shovel in case of a minor spill.

Major Spills and Related Accidents For the purpose of this RVMP, major spills involve reportable quantities of hazardous materials as required by Chapter 446k, Section 22a-450, of the Connecticut General Statutes. Report the spill to Connecticut Department of Energy & Environmental Protection, call DEEP's Emergency Response Unit 24 hours a day at 866-DEP-SPIL (866-337-7745) or 860-424-3338. Related accidents include fire, poisoning and automobile accidents.

- ❖ Administer proper first aid and call an ambulance and/or Call the Poison Control Center at 800-222-1222 for help with first aid information.
- ❖ Call the police and/or fire department in cases involving automobile accidents or fire.
- ❖ Avoid breathing fumes of burning herbicides.
- ❖ Put out all sources of fire. Do not light flares, cigarettes, etc. which can ignite certain herbicides.
- ❖ If possible, control the spill by stopping the leak or source of spill.
- ❖ Confine the spread of liquids with a dike composed of soil or other absorptive materials.
- ❖ Notify the DEEP if water bodies are contaminated, and for releases or threatened releases of reportable quantities of hazardous material.
- ❖ Notify the Canton Director of Public Works.
- ❖ Clean up spill:
 - If the spill occurs in a public location, isolate the spill areas and deny unauthorized entry until cleanup is complete.
 - Absorb spilled liquids with sand, absorptive clay, spill control gel, vermiculite, pet litter, sawdust or other absorptive material. Wear proper protective clothing and equipment.

- Sweep or shovel contaminated absorbent into a leak proof, sealable container for proper disposal.
- Dry herbicides, such as dust, granular and pellets can be directly swept or shoveled into leak proof sealable containers without absorptive materials.
- Neutralize contaminated area with hydrated lime, sodium hypochlorite (bleach), or soapy water. Never mix bleach and ammonia base products or a poisonous gas will result.
- Dispose of contaminated material at an approved location.

Minor Spills Minor spills involve less than reportable quantities of hazardous materials.

- ❖ In case of contact with herbicides, wash with plenty of soap and water.
- ❖ Administer proper first aid and see a doctor, if necessary.
- ❖ Change clothing which has absorbed herbicides.
- ❖ Clean up spill. (Same as above for major spills).

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

- ❖ Herbicide label
- ❖ Herbicide MSDS sheet
- ❖ Herbicide Manufacturers Dow 517-636-4400
- ❖ Dupont 800-441-3637
- ❖ Monsanto 314-694-4000
- ❖ American Cyanamid Co. 201-835-3100
- ❖ Connecticut DEEP's - Pesticide Management Program – 860-424-3369.
- ❖ Connecticut DEEP's - Emergency Response Unit 24 hours a day at 866-DEP-SPIL 866-337-7745 or 860-424-3338
- ❖ ChemTrec 800-424-9300
- ❖ Connecticut Poison Control Center 800-222-1222

HERBICIDE ALTERNATIVES

While the Department of Public Works remains committed to finding effective alternatives, to date no effective alternative to conventional herbicides has been developed or proven to provide superior control in right of way applications. The agricultural industry has made some successful strides in seeking and testing alternatives. DPW will continue a good faith effort to stay true to our statements and mission of minimizing herbicide use and seeking effective alternatives to chemical control. DPW will evaluate and consider incorporating any effective new vegetation control methods into our right of way program during the course of this Roadside Vegetation Management Plan.

EVALUATION AND RECOMMENDATIONS

On an annual basis, Canton Department of Public Works will evaluate the success of the roadside vegetation management program. This evaluation will include reporting of control measures, as well as quantities of herbicides used and total area treated. In addition, in light of the goals of this plan, the condition of the roadside will be evaluated. Finally, the

evaluation will make recommendations including any possibilities for reducing mechanical and/or chemical controls. DPW will provide a copy of the evaluation report annually to the Board of Selectman.