Yearly Operational Plan (YOP)

City of Worcester

2013

Prepared By:

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Program Purpose

The purpose of 333 CMR 11.00, Rights of Way Management, is to promote the implementation of integrated pest management techniques and to establish standards, requirements, and procedures necessary to minimize the risk of unreasonable adverse effects on human health and the environment associated with the use of herbicides to maintain streets, road, sidewalks and paths. These regulations establish procedures that guarantee ample opportunity for public and municipal agency review and input on the right-of-way maintenance plans.

A yearly operational plan (YOP) must be submitted to the Department of Agricultural Resources every year herbicides are intended for use to maintain rights-of-way. The YOP provides a detailed program for vegetation management for the year. A five year Vegetation Management Plan (VMP) was approved by the Department and is available for review at the Worcester Department of Public Works & Parks, Board of Health, Conservation Commission, and Office of the City Manager.

Upon receipt of this YOP, the Department publishes a notice in the *Environmental Monitor*. The City must provide a copy of the proposed YOP and *Environmental Monitor* notice to the Board of Health, Conservation Commission, and the City Manager for the City of Worcester, in which the herbicide treatment is proposed. The Department allows a 45-day comment period on the proposed YOP beginning with the publication of the notice and receipt of the YOP and *Environmental Monitor* notice by the City.

Public notification of herbicide application to the streets is made at least 21 days in advance of the treatment by a separate notice. Notice is made to the Department of Agricultural Resources, City Manager, Board of Health, and the Conservation Commission in the City of Worcester.

Any comments on this YOP should be made to the person designated herein as the person supervising the YOP or the person performing the treatment.

This Yearly Operational Plan, approved by the Massachusetts Department of Agricultural Resources pursuant to Rights-of-Way Management Regulations (333 CMR 11.00), has been adopted by the following roadway vegetation management program in the City of Worcester. The undersigned hereby acknowledges that the conditions of the Yearly Operational Plan will be adopted and complied with.

Municipality:	City of Worcester
Name:	Mr. Matthew Labovites
Office:	Assistant Commissioner of Operations
Address:	20 East Worcester Street, Worcester, MA 01604-3695
Telephone / Fax:	Ph: (508) 799-1476 Fax: (508) 799-1473
Email:	labovitesm@worcesterma.gov
Signature:	_____
Date:	_____
Wetland Determination:	Issued by the Worcester Conservation Commission May 11, 2009 Valid for 2009-2013

Individual Supervising YOP

Name and Title:	Mr. Matthew Labovites Assistant Commissioner of Operations
Department:	Department of Public Works & Parks
Address:	20 East Worcester Street, Worcester, MA 01604-3695
Telephone:	(508) 799-1476
Signature:	_____

Municipal Department Performing Herbicide Treatment

Either City staff that are licensed herbicide applicators or a licensed herbicide applicator under contract to the City of Worcester Department of Public Works and Parks will perform the herbicide treatment. Applicators are certified by the Massachusetts Department of Agricultural Resources in the applicator category:

Certified Applicator:

License Number:

Company or Department:

To Be Determined.

Address:

Telephone Number:

Email:

The following information is provided as details of the YOP of the City of Worcester in accordance with the requirements of 333 CMR 11.06 (2):

Herbicides Proposed

The herbicide proposed for use in calendar year 2013 is:

Herbicide & EPA Reg:	Accord Concentrate or Rodeo (62719-324) Round-Up Pro (524-475)
Active Ingredient:	Glyphosate
Registrant:	Dow AgroSciences
Application Rate:	Accord Concentrate – 2-5% solution Rodeo – 2-5% solution

Round-Up Pro – 2-5% solution

Complete information for this product is attached, including the Material Safety Data Sheet (MSDS). The herbicide fact sheet for the above listed herbicide is attached to and made part of this YOP.

Herbicide Application Techniques and Alternative Control Procedures

The herbicide will be applied in accordance with the instructions in the attached manufacturer's information. Alternative control procedures, applicable at the designated "No Spray Zones" will consist of hand cutting, mowing, or selective trimming (mechanical). Other alternative controls will include routine street sweeping along with crack and road repairs.

Low volume foliar treatments will be made using ready to use squirt bottles or hand pump backpacks. High volume foliar application may include a truck-mounted hydraulic sprayer. In both cases, the herbicide solution is applied to lightly wet the target plant/ target area. These techniques have few limitations with the exception being reduced effectiveness on tall, high-density target vegetation and will not be used on vegetation over 12 feet in height.

Cut stump treatments will generally be performed to trees greater than 12' tall and resprout. Cut stump treatments consist of mechanical cutting of target species using chain saws immediately followed by herbicide treatment applied with a squirt bottle, a hand pump sprayer, or painted on the freshly cut surface of the stump. The herbicide is limited to freshly cut surface of the remaining stump.

All equipment used for vegetation management programs must be maintained in good working condition, and should be of adequate design and ability to produce the professional quality of work that the City requires. Because the City recognizes the vast variety and performance of herbicide application equipment, dictating how that equipment should be calibrated to deliver precise amounts of herbicide to effectively control a host of vegetation conditions is literally impossible. Therefore, the City will utilize the most appropriate application equipment, calibrated to effectively and legally control target vegetation.

City staff will insure that vegetation management activities are conducted in a professional, safe, efficient manner, with special attention directed towards minimal environmental impact. City staff holding applicator status are qualified, licensed and certified to apply herbicides. "Qualified" means those personnel who have been trained to recognize and identify target and non-target vegetation and are knowledgeable in the safe and proper use of both mechanical and chemical vegetation management techniques. All personnel applying herbicides in Massachusetts must be licensed in the Commonwealth and must work under the on-site supervision of a certified applicator. All applicator personnel will follow all label instructions regarding Personal Protective Equipment (PPE).

Staff applicators will comply with all applicable federal and state laws and regulations. These include, but are not limited to, applicable OSHA, FIFRA and DOT regulations, 333 CMR 1-15.00, Rights-of-Way Management, Chapter 132B, Chapter 85 of the Acts of 2000 and 321 CMR 10.00 as managed by NHESP.

Herbicides will only be applied in a safe and judicious manner, in compliance with all-applicable State and Federal pesticide regulations.

Applicators will at all times exercise good judgment and common sense during herbicide treatment activities, and will immediately cease operations if adverse conditions or other circumstances warrant.

Herbicides will NOT be applied during the following adverse weather conditions:

A. During high wind velocity, per 333 CMR 11.03
B. Foliar applications during periods of dense fog, or moderate to heavy rainfall
C. Foliar applications of volatile herbicides during periods of high temperatures (90 plus degrees Fahrenheit) and low humidity
D. Cut Stump applications when deep snow (i.e. 6" plus or ice frozen on stem or stump) prevents adequate coverage of target plants to facilitate acceptable control

City staff applicators or a representative of the City must complete daily vegetation management reports that include:

A. Date, name and address of vegetation management staff
B. Identification of site or work area
C. List of crew members
D. Type of equipment and hours used, both mechanical and chemical
E. Method of application and description of target vegetation
F. Amount, concentration, product name of herbicide(s), adjuvants, and dilutants (EPA registration numbers must be on file)
G. Weather conditions
H. Notation of any unusual conditions or incidents, including public inquiries
I. Recording and/or verification of sensitive areas on ROW maps

A Daily Vegetation Management Form is included in the Appendix.

Target Vegetation

The target vegetation for this YOP will include hazard, detrimental and nuisance vegetation.

Vegetation management crews will exercise care to insure that low-growing desirable vegetation and other non-target organisms are not unreasonably affected by the application of herbicides.

<u>Hazard Vegetation</u>

Hazard vegetation represents vegetation that may: obscure sightlines, obscure signs, obscure vehicular movement, block fire hydrants, windfall hazards, and winter shading

(increase in use of deicing). This may include woody vegetation along the edges of roadways.

Detrimental Vegetation
Detrimental vegetation includes grasses and woody plants that are destructive or compromise the function of infrastructure including: cracks along the roadway, pavement/bridge joints, medians/traffic islands, and drainage structures/drainageways.

Nuisance Vegetation
This category includes nuisance vegetation that could cause problems to the general public, employees or contractors. Target vegetation in this category is primarily Poison Ivy and other nuisance vegetation within 10 feet of the edge of pavement, bridge abutments, drainage structures and other areas accessible by the public and/or requiring maintenance.

Description of Methods Used to Flag or Otherwise Designate Sensitive Areas

Sensitive areas as defined by 333 CMR 11.04 are 'any areas within Rights-of-Way, including No-Spray and Limited Spray Areas, in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects.' The Sensitive Areas Restriction Table at the end of this document defines specific sensitive areas and associated buffer zones and treatment restrictions such as limited-spray and no-spray zones.

The attached map identifies 'Sensitive Areas Not Readily Identifiable in the Field'. With this map and the assistance of the Conservation Commission Agent, sensitive areas will be identified and marked along the ROW prior to any herbicide application. Field methods will include flagging and/or roadway marking (via paint) of start and stop areas.

Procedures and Locations for Handling, Mixing and Loading of Herbicide Concentrates

The herbicide will be managed and mixed by licensed DPW&P staff in the controlled environment at the DPW&P Reservoir Moy Ranch Facility in Holden, Massachusetts. Although it is expected that all the mixed herbicide will be used, any remaining will be stored at the DPW&P Reservoir Moy Ranch Facility in accordance with manufacturer's instructions. The absorbent product "Speedi-Dri" will be available for use at the locations of application. If there is a leak in the hose, the pump will be immediately shutoff. Equipment used will be washed at the DPW&P Reservoir Moy Ranch Facility.

Herbicides will be handled and applied only in accordance with the label instructions. Staff applicators will strictly adhere to all mandated safety precautions directed towards the public, the applicator and the environment.

Remedial Plan to Address Spills and Related Accidents

All mixing and loading of herbicides will be conducted at the central facility where the herbicides are stored. Only the amount of herbicide necessary to carry out the vegetation

control, based on monitoring results, will be mixed to ensure that there will be no waste and minimize potential problems. The vehicles carrying out the spray operations will be equipped with a bag of absorbent, activated charcoal, leak-proof containers, a broom and a shovel in case of minor spills. A clipboard log of the herbicides on the vehicle will be kept on the vehicle. Herbicide labels and fact sheets will be carried on-site by the applicator.

As soon as any spill is observed, immediate action will be taken to contain the spill and protect the spill area. The cause of the spill must be identified and secured. Spill containment will be accomplished by covering the spill with absorptive clay or other absorptive material or, for large spills, building clay or soil dikes to impede spill progress. Until completely 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 will be remedied by soaking up the spill with adsorption clay or other adsorptive material and placing it in leak proof containers, removed from the site and disposed of properly. Dry herbicides, such as granulars, will be swept up or shoveled up directly in leak proof containers for proper disposal. All contaminated soil will be placed in leak proof containers, removed from the site and disposed of properly. Activated charcoal will be incorporated into the soil at the spill location per label instructions. Any minor spill will be reported to the Pesticide Bureau.

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 Incident Response Unit and the Pesticide Bureau must be contacted.

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

MassDEP will be contacted when there is a spill of a regulated quantity, regardless of major or minor spill status and in accordance with 310 CMR 40.0000 Massachusetts Contingency Plan.

Emergency Contacts

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

- Herbicide label
- Herbicide MSDS sheet
- Herbicide Manufacturer

DOW	(800) 992-5994
Dupont	(800) 441-3637
Monsanto	(314) 697-4000
NuFarm	(877) 325-1840

- Massachusetts Pesticide Bureau Main # (617) 626-1720
  Michael McClean (617) 626-1781
- Massachusetts Department of Environmental Protection
  Emergency Response (888) 304-1133
- Department of Public Health
  Environmental Toxicology Program (617) 624-5757
- Massachusetts Poison Control Center
  24-Hour Hotline (800) 222-1222
- City of Worcester Department of Public Works & Parks 508-929-1300
- City of Worcester Fire Department 508-799-8606 or 911
- City of Worcester Police Department 508-799-1816 or 911
- Town of Holden Police Department 508-829-4444 or 911
- Town of Holden Fire Department 508-829-0266 or 911
- Chem-Trec 800-424-9300
- National Pesticide Information Center 800-858-7378
- National Animal Poison Control Center 888-426-4435

ALB Cooperative Eradication Program

In 2008, the U.S. Department of Agriculture confirmed the presence of the Asian longhorned beetle (ALB – *Anoplophora glabripennis*) in the City of Worcester. This invasive insect can infest tree species (including Maple, horse chestnut, birch, poplar, willow, elm and ash) and eventually destroy the tree (host). In 2008, a portion of Worcester county was quarantined for ALB via Federal Order with several Amended Orders issued since then. Per this order, associated amendments and the MA Cooperative ALB Eradication Program, all contractors and staff completing work under this VMP shall be familiar with and follow local, state and federal ALB procedures currently in place regarding work with host species. This will include activities related to cutting, treatment, removal and disposal of infected or potential host species. Current ALB program information and fact sheets are included in the Appendix.

Sensitive Area Restrictions

333 CMR 11.04

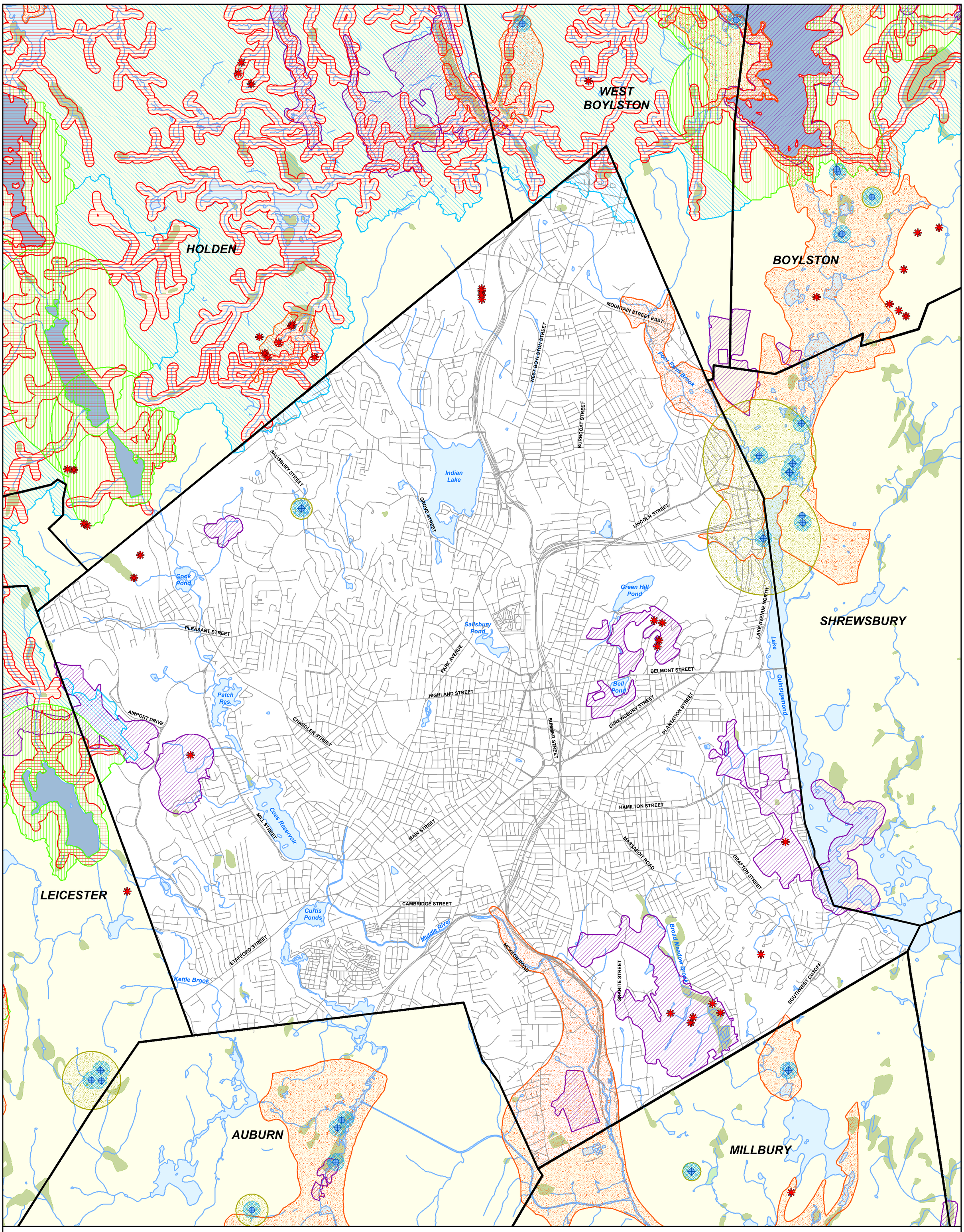
CONTROL STRATEGIES FOR SENSITIVE AREAS

Sensitive Area	Minimum Buffer Zone (feet)	Control Method	Time Restriction Code
Public Ground Water Supplies	400'	Mechanical Only	None
Primary Recharge Area	Designated buffer zone or 1/2 mile radius	Mechanical, Recommended Herbicides*	1
Public Surface Water Supplies (Class A & Class B)	100'	Mechanical Only	None
	100'-400'	Recommended Herbicides	1
Tributary to Class A Water Source, within 400' upstream of water source	100'	Mechanical Only	None
	100'-400'	Recommended Herbicides	1
Tributary to Class A Water Source, greater than 400' upstream of water source	10'	Mechanical Only	None
	10'-200'	Recommended Herbicides	1
Class B Drinking Water Intake, within 400' upstream of intake	100'	Mechanical Only	None
	100'-200'	Recommended Herbicides	1
Private Drinking Water Supplies	50'	Mechanical Only	None
	50'-100'	Recommended Herbicides	2
Surface Waters	10'	Mechanical Only	None
	10'-100'	Recommended Herbicides	2
Rivers	10' from mean annual high water line	Mechanical Only	None
	10'-200'	Recommended Herbicides	2
Wetlands	100' (treatment in wetlands permitted up to 10' of standing water)*+	Low-pressure Foliar, CST, Basal Recommended Herbicides	1
Habitated Areas	100' (for high-pressure foliar only)	Recommended Herbicides	2
Agricultural Area (Crops, Fruits, Pastures)	100' (for high-pressure foliar only)	Recommended Herbicides	2
Certified Vernal Pools	10'	Mechanical Only	None
Certified Vernal Pool Habitat	10'-outer boundary of habitat	As recommended by NHESP in their permit process, no treatment without written permission	
Priority Habitat	As recommended by NHESP in their permit process, no treatment without written permission		

Restriction Code #1: A minimum of twenty-four months shall elapse between applications

Restriction Code #2: A minimum of twelve months shall elapse between applications

*Massachusetts recommended herbicides for sensitive sites



Legend

- Certified Vernal Pool
- Public Water Supply (April 2012)
- NHESP Priority Habitats of Rare Species (Oct 2008)

Wellhead Protection Areas (April 2012)

- Zone I (No Spray Zone)
- IWPA
- Zone II

Surface Water Protection Zones (April 2012)

- A
- B
- C

Hydrography

- Lake, Pond
- Reservoir
- Wetland
- Stream, Brook
- Town Boundary

N
W E
S

0 2,000 4,000 6,000 8,000 Feet

0 0.5 1 1.5 2 Miles

Data Sources: MassGIS, MassDEP, NHESP, Town of Millis

2013 Herbicide Treatment Locations

Sensitive Areas Not Readily Identifiable in the Field

Worcester, Massachusetts

Comprehensive Environmental Inc.