MUNICIPAL ROADWAY VEGETATION MANAGEMENT PLAN

This Municipal Roadway Vegetation Management Plan, submitted to the Massachusetts Department of Agricultural Resources pursuant to the Rights of Way Management Regulations (333 CMR 11.00), has been reviewed and is recommended for adoption in the below named municipality. The undersigned hereby acknowledges the conditions of the Municipal Roadway Vegetation Management Plan will be adopted and complied with.

MUNICIPALITY: City of Holyoke Massachusetts

PLAN TYPE (circle one): Vegetation Management Plan VMP Yearly Operation Plan YOP

PLAN AUTHORS: Marcus Gabrieli, Holyoke DPW Safety Inspector and William Fuqua, Holyoke DPW General Superintendent

DEPARTMENT: Holyoke Department of Public Works (DPW)

ADDRESS: 63 Canal Street, Holyoke, Massachusetts 01040

PHONE NUMBER: (413) 322-5645 FAX: (413) 539-6807

SIGNATURES, PLAN AUTHORS: _____

_____

SIGNATURE, BOH CHAIRPERSON: _____

SIGNATURE, CC CHARIPERSON: _____

SIGNATURE, MAYOR: _____

A copy of this document should be kept on file in the municipality offices. Please send the **original** to the Massachusetts Department of Agricultural Resources with the submitted Vegetation Management Plan/Yearly Operational Plan.

Massachusetts Department of Agricultural Resources, Pesticide Bureau, Right of Way Program, 251 Causeway Street, Suite 500, Boston, Massachusetts 02114-2151

NOTICE

Pursuant to the provisions of the Rights of Way Management Regulations, 333 CMR 11.00, in order to apply herbicides to control vegetation along rights of way, a 5-year Vegetation Management Plan (VMP) and a Yearly Operational Plan (YOP) must be approved by the Department of Agricultural Resources (DAR). Therefore, notice of receipt of a YOP and procedures for public review is hereby given as required under these regulations.

A VMP and YOP have been submitted for:

The **Holyoke Department of Public Works**

These plans have been prepared by and submitted for:

The **Holyoke Department of Public Works**

The corresponding City of Holyoke rights of way that are planned to receive a herbicide application during the calendar year 2008 are identified in the YOP as follows:

Locations:
APPLETON ST. from Dwight St. to South Canal St.
BEECH ST. from Northampton St. to Lyman St.
BROWN AVE. from Laurel St. to South St.
CABOT ST. from Maple St. to South Canal St.
CANAL ST. from Lyman St. to North Bridge St.
CHERRY ST. from Jarvis Ave. to Northampton St.
DWIGHT ST. from Northampton St. to Main St.
EASTHAMPTON RD. from Northampton St. to Jarvis Ave.
HAMPDEN ST. from Northampton St. to Front St.
HERITAGE ST. from Appleton St. to Dwight St.
HIGH ST. from Resnic Blvd. to Lyman St.
HILLSIDE AVE. from Westfield Rd. to Edwin Ave.
JACKSON ST. from Resnic Blvd. to Main St.
LAUREL AVE. from Northampton St. to Brown Ave.
LINCOLN ST. from Northampton St. to Hampden St.
LYMAN ST. from Beech St. to Canal St.
MAIN ST. between Mosher St. and Ingleside St.
MAPLE ST. from St. Kolbe Dr. to Parenteau Dr.
NORTHAMPTON ST. (Route 5) from the Stop & Shop Plaza to Brookwood Rd.
PLEASANT ST. from Appleton St. to Northampton St.
POPLAR ST. from Essex St. to Appleton St.
RESNIC BLVD. from Beech St. to High St.
SARGEANT ST. from Northampton St. to South Canal St.
SOUTH ST. from Northampton St. to Main St.
SUFFOLK ST. from Sycamore St. to Heritage St.
WESTFIELD RD. from Northampton St. to I-91 Overpass
WEST FRANKLIN ST. from Northampton St. to Beech St.

45 DAY PUBLIC NOTICE

Public Review:

The DAR in particular seeks the verification of sensitive area locations reported in the YOP. The DPW itself has a limited ability to survey the geography, land use, and the water supplies through which the rights of way are located. However, other City Departments may have most of this information readily available, and the particular knowledge to better certify the sensitive areas in this community. Therefore, the DPW requests and urges the assistance of the Conservation Commission and the Board of Health in reviewing the completeness and accuracy of the maps contained in the submitted documents. The DAR has established the following procedures for this review.

The VMP, YOP, and a copy of this notice will be sent by the applicant (Holyoke DPW) to the Conservation Commission, Board of Health (or other designated health agent), and to the head of government (City Mayor) of the community where herbicides are to be applied along the rights of way during the calendar year 2010. Municipal agencies and officials will have forty-five (45) days following receipt of the plans to review maps contained in the documents that indicate the location of "sensitive areas not readily identifiable in the field" for inaccuracies and omissions. "Sensitive Areas" are defined in Section 11.02 (a-f) of the Rights of Way Management Regulations.

Municipal agencies and officials are requested to forward the VMP and YOP to the appropriate officials in their municipality qualified to certify the accuracy of sensitive area locations as indicated on the maps. The maps should be "corrected" and returned to the applicant. Also, a copy of the maps with these corrections indicated should be sent to the DAR to the address listed below, within the forty-five day review period. If a City or Town needs more time to carry out this review, it should send a written request for an extension to the DAR and state why there is a "good cause" for requesting additional time.

All corrections are required to be made by the applicant, and corrected maps sent back to the City or Town before the YOP can be considered "approved" by the DAR for vegetation maintenance in that municipality. Any dispute on the part of the applicant regarding corrections made by municipal authorities should be indicated in writing to the DAR and the City or Town which requested the disputed changes, within fifteen (15) days of receipt of the request. The DAR will decide whether or not the YOP should be approved without the requested changes. The DAR will consider the "final approval" of a YOP individually for each municipality.

The final twenty one (21) days of the public review period can serve concurrently to provide public notification as required by Section 11.07 of the Rights of Way Management Regulations, if the applicant has an approved VMP, and if all the requisite City or Town offices which have received copies of the YOP have completed their review and corrections have been duly made by the applicant and approved by the DAR.

Failure by the City or Town to respond to the applicant's submission of the YOP within the forty-five (45) day public review period will be considered by the DAR to indicate agreement by the municipal officials with the sensitive area demarcations as provided by the applicant in their YOP.

Any questions or comments on the information provided in the NOTICE and the procedures established for the municipal review as outlined above, should be addressed in writing to: Michael McClean, Rights of Way Program, State Pesticide Bureau, Dept. of Agricultural Resources, 251 Causeway Street, Suite 500, Boston, MA 02114-2151.

Any additional questions or comments on any information provided, as part of the proposed YOP, should be addressed in writing to: William D. Fuqua, General Superintendent, Holyoke Department of Public Works, 63 Canal St., Holyoke, MA 01040. A copy of such questions or comments should also be forwarded to Michael McClean at the address previously indicated.

TABLE OF CONTENTS

		Page
I.	Municipal Roadway Vegetation Management Plan Cover Page	1
II.	Notice/Locations of Herbicide Application	2
III.	45 Day Public Notice/Public Review	3
IV.	Table of Contents	4
V.	Individual Supervising the YOP	5
VI.	Identity of the Certified Applicator	5
VII.	Herbicides Proposed Including Application Rates, Carriers, Adjuvants	6
VIII.	Herbicide Application Techniques and Alternative Control Methods	6
IX.	Identification of Target Vegetation	7
X.	Flagging Methods to Designate Sensitive Areas on the Rights-of-Way	8-9
XI.	Procedures and Locations for Handling, Mixing and Loading of Herbicide Concentrates	10
XII.	Emergency Contacts	11

APPENDICES

A.	Herbicide Label, Fact Sheet (as approved by the DAR), and Material Safety Data Sheet	12
B.	Scope of Work and Maps (sketching Sensitive Areas not readily identifiable in the field), including:	13-16
	1. City of Holyoke Streets/Wetlands/Application Map showing: a. No Spray Zones b. Limited Spray Zones c. Spray Zones	15
	2. Topographical Map of Holyoke	16
C.	HDPW's 5-Year Vegetation Management Plan (2008 to 2012 VMP)	17
D.	HDPW's Application Instructions and Log	18-22
E.	Massachusetts Pesticide Bureau Most Current List of Approved Herbicides for use in Sensitive Areas on Rights-of-Way	23-25

I. Individual Supervising the YOP:

The individual supervising the implementation and conditions of the YOP is:

Name and Title: William D. Fuqua, General Superintendent
Department: Holyoke Department of Public Works (DPW)
Address: 63 Canal Street, Holyoke, MA 01040
Phone Number: (413) 322-5645

Signature: _____

II. Identity of the Certified Applicator:

In all likelihood, a contractor certified by the Department of Agricultural Resources (DAR) as a Commercial Applicator under Category 40 (Rights-Of-Way), will be performing the herbicide treatment. This certified contractor is:

Name and Title: Not determined yet.
Department:
Address:
Phone Number:
License No. & Expiration:

Signature: _____

In the event of _____ absence, a contractor who is appropriately certified by the DAR, or appropriately licensed by the DAR and working under the direct supervision of an appropriately certified applicator, would perform this work.

Contractor Name: Not determined yet. In the event it becomes
Address: necessary, the identity of such contractor would
Phone Number: be announced to the DAR before the application
Contact Person(s): process commenced.

III. Herbicides Proposed including Application Rates, Carriers, Adjuvants:

Herbicides that may be used on Municipal roadways are limited to those found in the most current Massachusetts Pesticide Bureau "List of Approved Herbicides for use in Sensitive Areas on Rights-of-Way" (refer to Appendix F for this list):

The following is the name, control method, mixture, carrier/adjuvant and application rate of the herbicide to be used. Refer to Appendix A for the Herbicide Fact Sheet and Product Label.

Control Method	Herbicide/Mixture %	Carrier/Adjuvant	Application Rate
Foliar[1]	Roundup Pro[2] 41%	Surfactant Blend[3]	As per label "Part 8.[8] Roadsides" page 7.
Cut Stump	Roundup Pro		50 to 100% solution of this product to the freshly-cut surface immediately after cutting.

IV. Herbicides Application Techniques and Alternative Control Methods:

Roadway vegetation management will involve IPM management techniques, including active planting to encourage appropriate competing vegetation, mechanical control methods (street sweeping and vacuuming, hand cutting, mowing, selective trimming) and chemical control (e.g., foliar herbicide treatment and cut stump treatments). The particular method(s) chosen will be based on a variety of factors to establish an easily maintainable, stable plant population that will not interfere with vehicles or pedestrians. The method chosen for a given vegetation problem will also attempt to achieve a long term, low maintenance vegetation program through the encouragement of a stable herbaceous community.

Alternative control measures will include programs to encourage growth of desirable grasses and wildflower beds, along with various landscaping and visual improvement projects focused along City roadways (e.g., adopt-an-island program, cut stump, clearing and grubbing, selective clearing and thinning).

Chemical controls include foliar treatments and cut stump treatments. Mechanical controls include planting, street sweeping and vacuuming, hand cutting, mowing and selective trimming (refer to pages 4 through 7 of the VMP for detailed descriptions of these techniques).

---

1 Application of herbicide diluted in water to foliage via a low-pressure sprayer.

2 Isopropylamine salt of glyphosate, the active ingredient in Roundup Pro herbicide makes up 41 percent of the formulation (or contains 480 grams per litre or 4 pounds per U.S. gallon).

3 A phosphate ester neutralized polyethoxylated tallowamine mixture makes up 14.5 percent of the formulation of Roundup Pro to aid penetration of the active ingredient to allow control of weeds.

V. Identification of Target Vegetation:

Target vegetation along roadways is limited to vegetation that poses a public nuisance and/or poses a risk to pedestrians or vehicular safety. Target vegetation and control methods intended are indicated below. For a full description of each method, refer to the VMP.

Target Vegetation	Mechanical Control	Chemical Control
Public Nuisance Vegetation - poison ivy, other "poisonous" vegetation growing within 10' of roadways.	Hand cutting Selective Trimming Mowing	Foliar herbicide treat. Cut stumps
Nuisance Grasses -stem density and height impeded movement or visibility.	Hand Cutting Selective Trimming Mowing Street Sweeping & Vacuuming	Foliar herbicide treat. Cut stumps
Vegetation Posing a Risk to Safety -vegetation hampers visibility or impedes movement along roads.	Hand Cutting Selective Trimming Mowing Planting	Foliar herbicide treat. Cut stumps

VI. Flagging Methods to Designate Sensitive Areas on the Rights-of-Way:

Sensitive areas are identified as public ground water supplies, public surface water supplies, private drinking water supplies, surface waters, wetlands, habitat areas, and agricultural areas. For the purpose of identification, sensitive areas are separated into two categories, identifiable and not readily identifiable areas in the field.

Sensitive areas not readily identifiable in the field include public groundwater supplies, wetlands, private water supplies and public surface water supplies. The process by which sensitive areas were determined were as follows:

a) areas to be sprayed were walked to determine sensitive areas;

b) questionable areas were checked by the CC; and,

c) BOH records were reviewed to locate wells of older homes that do not conform to today's stringent setback requirements. Homeowners were contacted in cases where no records were available.

These areas will be flagged or otherwise marked as "no spray zones" (e.g., via the use of high visibility spray painted "orange arrows") applied to adjacent curbs, sidewalks or road surfaces according to the table below:

Sensitive Area Restriction Guide (333 CMR 11.04)

Sensitive Area	No Spray Zone	Limited Use Zone	Where Identified
Wetlands and Water Over Wetlands	Within 10 feet (unless provisions of 333 CMR 11.04(4)(c) are followed)	10 – 100 feet; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps and identify on site
Certified Vernal Pool	Within 10 feet	10 feet to the outer boundary of any Certified Vernal Pool Habitat; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps and identify on site
Public Ground Water Supply	Within 400 feet (Zone I)	Zone II or IWPA (Primary Recharge Area); 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps
Public Surface Water Supply	Within 100 feet of any Class A public surface water source	100 feet to the outer boundary of the Zone A; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps

Sensitive Area	No Spray Zone	Limited Use Zone	Where Identified
	Within 10 feet of any tributary or associated surface water body located outside of the Zone A	10 feet to the outer boundary of the Zone A; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	
	Within 100 feet of any tributary or associated surface water body located within the Zone A of a Class A public surface water source		
	Within a lateral distance of 100 feet for 400 feet upstream of any Class B Drinking Water Intake	Within a lateral distance of between 100 - 200 feet for 400 feet upstream of intake; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	
Private Water Supply	Within 50 feet	50 – 100 feet; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	In YOP well list and identify on site
Surface Waters	Within 10 feet from mean annual high-water line	10 feet from the mean annual high water line and the outer boundary of the Riverfront Area; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps and identify on site
Agricultural and Inhabited Areas	N/A	0 – 100 feet 12 months must elapse between application; Selective low pressure, using foliar techniques or basal or cut-stump applications.	Identify on site
State-listed Species Habitat	No application within habitat area except in accordance with a Yearly Operational Plan approved in writing by the Division of Fisheries and Wildlife		YOP Maps

VII. Procedures and Locations for Handling, Mixing and Loading of Herbicide Concentrates:

All mixing and loading of herbicides will be conducted at the central facility where the herbicides are stored (refer to appendix E). Only the amount of herbicide necessary as determined by monitoring results will be mixed to carry out the vegetation control. The vehicle carrying out the spray operation will be equipped with a spill kit, including a bag of absorbent, activated charcoal, leak-proof container a broom and a shovel. A clipboard log of the herbicides on the vehicle will be kept on the vehicle (refer to appendix E). Herbicide labels, fact sheets and/or material safety data sheets should be carried on-site by the applicator.

As soon as any spill is observed, immediate action by the applicator will be taken to contain the spill and protect the environment. The cause of the spill must be identified and secured. Spill containment will be accomplished by covering the spill with an absorbent material or, for large spills, building clay or soil dikes to impede spill progress. Until completely cleaned, the general public will be protected against accidental exposure by placing barriers, posting signs or flagmen at strategic locations. If a fire is involved, care will be taken to avoid breathing fumes from any burning chemical.

In the event of a spill, information on safety precautions and clean-up procedures may be gathered from herbicide fact sheets, labels, and the sources listed on page 7 of this YOP, under Section VIII entitled “Emergency Contacts”.

Minor spills will be remedied by soaking up the spill with an absorbent material and placing it in a leak proof container for proper labeling and disposal. 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 at a rate of 7 pounds per thousand square feet to inactivate any herbicide residue. Any spill will be reported to the Pesticide Bureau. In addition to the Pesticide Bureau, the DEP Incident Response Unit will be notified of any spill in excess of the reportable quantity (“RQ”) value for the herbicide.

VIII. Emergency Contacts:

In the event of a spill or emergency, information on safety precautions and cleanup procedures may be gathered from the following contact sources:

Source	Telephone No.
Herbicide Label	For "Roundup" see Appendix "A"
Herbicide Fact Sheet	same as above
Herbicide Material Safety Data Sheet	same as above
Herbicide Manufacturer	
DuPont	(800) 424-9300
Monsanto	(800) 332-3111 or (314) 694-4000
Holyoke Fire and/or Police Departments	911
Holyoke DPW Safety Officer	(413) 322-5645
Holyoke Board of Health	(413) 322-5595
Holyoke Conservation Commission	(413) 322-5615
Holyoke Hospital (Work Connection)	(413) 534-2546
Massachusetts Pesticide Bureau	(617) 626-1781
Massachusetts Dept. of Environmental Protection (DEP)	(413) 784-1100 or (888) 304-1133
Massachusetts Dept. of Public Health, Board of Environmental Health Assessment, Toxicology Program	(617) 624-5757
Massachusetts Poison Control Center	(800) 682-9211
CHEMTREC	(800) 424-9300
US Environmental Protection Agency (EPA)	
Pesticide Hot Line	(800) 858-7378

APPENDIX A

Herbicide Label,
Fact Sheet (as approved by the DAR),
and Material Safety Data Sheet

APPENDIX B

Scope of Work and Maps (sketching Sensitive Areas not readily identifiable in the field) including:

1. City of Holyoke Streets/Wetlands/Application Map Showing:
   a. No Spray Zones
   b. Limited Spray Zones
   c. Spray Zones

2. Topographical Map of Holyoke

SCOPE OF WORK

The proposed work involves the application of herbicides to control target vegetation along City roads in accordance with the Rights of Way Management Regulations (333 CMR 11.00) and the Holyoke DPW's Vegetation Management Plan (VMP). The VMP has been approved by the Department of Agricultural Resources, and became effective for a five (5) year period starting in 2008.

Primary target vegetation locations include: traffic islands; curbing; expansion joints; sidewalks; median barriers; pavement crevices; sign and delineator posts; poison ivy, oak and sumac; proposed wildflower beds; and other areas adjacent to City roads and intersections. Additional landscape and visual improvement projects will be focused along City roads, and will address the management of vegetation problems in those areas in the most environmentally sound manner while minimizing vegetation control in the long term (i.e., selecting pruning, thinning, clearing, cut stump, and foliar herbicide treatments).

Any applicator of herbicides will hold a valid pesticide license/certificate from the DAR, and will adhere to the operational guidelines set forth in the VMP.

APPENDIX B (1)

City of Holyoke
Streets/Wetlands/Application Map

SEE ATTACHED, THE CURRENT YEAR
HOLYOKE PLANNING DEPARTMENT
APPLICATION MAP

APPENDIX B (2)

Topographical Map Holyoke

APPENDIX C

HDPW's
Vegetation Management Plan (VMP)

APPENDIX D

HDPW's
Application Instructions and Log

Herbicide

APPLICATION INSTRUCTION

REVISED 3/3/08

- **Don proper hand protection (Latex Examination Gloves or similar protection), eye protection (safety glasses w/side shields or chemical goggles, water proof shoes or over shoes, long-sleeved shirts and pants prior to handling, mixing and applying.**

- **Read the herbicide "label" and "Material Safety Data Sheet" (MSDS) thoroughly before applying. Keep a copy of the label, MSDS and herbicide application log with you at all times during application.**

- **For low volume directed spray applications, mix and apply the manufacturer's suggested rate (see applicable label) for the herbicide. Apply <u>only</u> by hand using a low to moderate pressure or low to moderate-ranged, large droplet spray.**

- **Avoid contact with your hands, skin, mouth or eyes. Rinse exposed skin or eyes with copious amounts of cold water, as soon as possible.**

- **Remove and discard your gloves, and wash your hands with soap and water before eating, smoking, or applying cosmetics.**

- **Record all applications <u>daily</u> per the "herbicide application log".**

Herbicide

APPLICATION INSTRUCTION

REVISED 3/3/08

- **After each daily application, return all unused herbicide to its <u>closed</u>, original container, and lock inside the pesticide storage cabinet in Bay #1 of the DPW.**

- **The empty container retains vapor and product residue. Do not reuse original container. Triple rinse sprayer & nozzle after each use, and triple rinse the product container when empty; apply rinse water with sprayer to weeks, as you would apply the normal product/water mixtures. Do this so as to avoid creating any wastes of this product, which would need to be disposed of in an approved landfill for pesticide disposal. After rinsing, puncture the empty container and dispose of it in sanitary landfill or by incineration.**

Herbicide
APPLICATION LOG

REVISED 3/3/08

Name of City/Town:	Holyoke
Print Name of Applicator:	
Date of Application:	
Time Applied:	
Pesticide Brand Name:	
EPA Registration #:	
Application Method:	Applied by Hand
Total Amount Applied this Date:	_____ **(quarts/liters)** _____ **(quarts/liters)**
Locations to which Herbicide was applied:	See Attached Map(s), or List of Site Locations (reverse side) to which Herbicide was Applied.
Applicator's Signature:	

Comments: _____
_____
_____
_____
_____

These Records must be Retained for Three (3) Years, and Submitted to the City's Licensed Applicator so a Report can be made to the Pesticide Bureau, where necessary.

Herbicide
APPLICATION LOG

REVISED 3/3/08

Below is the List Site Locations to which Herbicide was Applied this Date:

Facility Name

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

These Records must be Retained for Three (3) Years, and Submitted to the City's Licensed Applicator so a Report can be made to the Pesticide Bureau, where necessary.

APPENDIX E

Massachusetts Pesticide Bureau
Most Current
List of "Approved" Herbicides
For Use in Sensitive Areas
On Rights-of-Way

Active Ingredient *Use Restrictions*	**Product Names** (EPA #) *Registrant*	
Glyphosate *Lowest Labeled Rate for all Glyphosate products*	**Round Up Pro** (524-475) *Monsanto*	**Accord SP** (62719-322) **Glypro-Plus** (62719-322) **Accord Concentrate** (62719-324) *Dow AgroSciences*
	Razor (228-366) **Razor-Pro (228-366)** **Riverdale AquaNeat Aquatic Herbicide** (228-365) *Nu Farm Americas*	
	While Accord Concentrate, Rodeo, Glyphosate VMF and Aquaneat all have aquatic uses, approval for their use as sensitive materials does NOT mean that they can be used for aquatic weed control, or directly applied to water, as part of a rights of way management program. Products are subject to the no-spray and limited spray provisions of 333 CMR 11.04.	
Metsulfuron Methyl *Lowest Labeled Rate for all Metsulfuron Methyl Products**	**Escort** (352-439) **Escort XP** (352-439) *EI Dupont*	**Riverdale Patriot Herbicide,** (228-391) *Nu Farm Americas*
Sulfometuron Methyl *Lowest Labeled Rate for all Sulfometuron-Methyl Products**	**Oust XP** (352-601) **Oust** (352-401) *EI Dupont*	**Riverdale Spyder Herbicide,** (228-408) *Nu Farm Americas*
Metsulfuron Methyl Sulfometuron Methyl *Lowest Labeled Rate**	**Oust Extra** (352-622) *EI Dupont*	
Ammonium Salt of Fosamine *Lowest Labeled Rate**	**Krenite S** (352-395) *EI Dupont*	
Imazapyr *3 pints/acre every 3rd year OR 2 pints/acre every*	**Arsenal** (241-346) **Arsenal Railroad Herbicide** (241-273) *BASF*	POLARIS HERBICIDE (241-346-228) POLARIS **RR** HERBICIDE (241-273-228)

other year for all Imazapyr Products		*NU FARM AMERICAS*
Triclopyr, Butoxy Ethyl Ester *The lowest of the following rates: 1. Between 10 feet and 50 feet of the resource: Lowest labeled rate* or 0.5 pints per acre* *2. Between 50 feet and the boundary of the limited spray zone: Lowest labeled rate* or 3 pints per acre*	**Garlon 4** (62719-40) *Dow AgroSciences*	**Riverdale Tahoe 4E Herbicide,** (228-385) *Nu Farm*

Holyoke - Vegetation Management Areas - Herbicide Prohibition Zones

The following are areas highlighted in "RED" are where herbicides cannot be applied due to their proximity to standing water, etc.

Map Code	Description
A	Due to the location of an underground aquifer and wetlands ... both sides of Northampton Street starting at the intersection with St Vincent Street and running north to the 2nd traffic light/entrance to the Stop & Shop Plaza.
B	Due to the location of the 2nd and 3rd Level Canal Systems ... both sides of Jackson Street from Sidehill Street east and across Main Street to Jackson Park, along both sides of Main Street from the Rt. 391 overpass north 50 feet past the intersection with Jackson Street.
C	Due to the location of the 1st and 2nd Level Canal Systems ... both sides of the streets 100 feet east and west of the canal crossings under the streets.
D	Due to the location of the 3rd Level Canal Systems ... both sides of the streets 50 feet west of the intersection with Canal Street.
E	Due to the location of the 1st and 2nd Level Canal Systems ... both sides of the east end of Hampden Street 50 feet west of the intersection with Pearl Street ... both sides of the north end of the Main Street from Lyman Street railroad bridge south to 50 feet past the intersection with Hobart Street ... both sides of Lyman Street from 100 feet west to east of the 1st Level Canal 100 crossing, and from 100 feet west to 100 east of the 2nd Level Canal crossing.
F	Due to the location of a spring ... both sides of Pleasant Street between the two utility poles at each end of the dogleg located just east of Montgomery Avenue.
G	Due to the location of the stream from Whiting Street Reservoir ... both sides of Northampton Street starting 100 feet south of the stream crossing and running north.

APPLICATION MAP

LOCATIONS FOR HERBICIDE APPLICATION:

APPLETON STREET - from Dwight St. to North Canal St.
BEECH STREET - from Northampton St. to Lyman St.
BROWN AVENUE - from Laurel St. to South St.
CABOT STREET - from Sycamore St. to South Canal St.
CANAL STREET - from Lyman St. to North Bridge St.
CHERRY STREET - from Homestead Ave. to Northampton St.
CHESTNUT STREET - from Sargeant St. to Lyman St.
DWIGHT STREET - from Easthampton Rd. to Main St.
EASTHAMPTON ROAD - from Northampton St. to Lindor Heights.
FRONT STREET - from Dwight St. to Lyman St.
HAMPDEN STREET - from Northampton St. to Front St.
HERITAGE STREET - from Appleton St. to Dwight St.
HIGH STREET - from Resnic Blvd. to Lyman St.
HILLSIDE AVENUE - from Westfield Rd. to Edwin Ave.
HITCHCOCK STREET - from Westfield St. to Northampton St.
JACKSON STREET - from Resnic Blvd. to Main St.
JOHN STREET - from High St. to Front St.
LAUREL STREET - from Northampton St. to Brown Ave.
LINCOLN STREET - from Northampton St. to Hampden St.
LINDEN STREET - from Hampden St. to Beech St.
LYMAN STREET - from Beech St. to Canal St.
MAIN STREET - between Mosher St. and Ingleside St.
MAPLE STREET - from St. Kolbe Dr. to Parenteau Dr.
NORTHAMPTON STREET - from Stop & Shop Plaza to Brookwood Rd.
PLEASANT STREET - from Essex St. to Northampton St.
POPLAR STREET - from Essex St. to Appleton St.
RESNIC BOULEVARD - from Beech St. to South Canal St.
SARGEANT STREET - from Northampton St. to South Canal St.
SOUTH STREET - from Northampton St. to Main St.
SUFFOLK STREET - from Sycamore St. to Heritage St.
WESTFIELD ROAD - from Northampton St. to I-91 Overpass.
WEST FRANKLIN STREET - from Northampton St. to Beech St.

* - At these street locations, herbicide application is conducted sporadically (only along the cracks in the road, granite curbing, and sidewalk surfaces where weeds are present). Along the majority of these locations, the tree belt extends all the way to the edge of the road ... thus spraying is not necessary.

- Spray Zone
- No Spray Zone
- Limited Spray (*only where curb or sidewalk)
- Streams
- Standing Water
- 100' Buffer (*each side spraying route)
- 100' Buffer (*each side canal)
- Wetlands - A composite of National Wetlands Inventroy, U.S. Department of the Interior, Washington D.C.: 1985 MacConnell Landuse and Massachusetts 1:25000 Hydrology, Massachusetts Executive Office of Environmental Affairs, MassGIS, Boston, MA; and Swamps, Holyoke, Planning Department.

Vegetation Management Areas, Manual Removal Only, Zones

The following areas cannot be sprayed with herbicides and will require manual removal of weeds due to their proximity to standing water.

1. Both sides of Northampton Street, 100 feet south of the stream crossing heading north (located approx. 200 yards north of Mountain Park Access Road).
2. Both sides of Lyman Street, from Front Street to Bowers Street, due to the 3rd and 2nd Level Canals.
3. Both sides of Dwight Street, from Front Street to Bowers Street, due to the 3rd and 2nd Level Canals.
4. Canal Street, both sides, from North Bridge Street to Race Street, due to the 2nd Level Canal.
5. Both sides of Appleton Street, from Nick Cosmos Street to Main Street, due to the 3rd and 2nd Level Canals.
6. Both sides of Cabot Street, from Nick Cosmos Way to Main Street, due to the 3rd and 2nd Level Canals.
7. Both sides Cabot Street, from South Canal Street to the Willimansett Bridge due to the 1st Level Canal and the River.
8. Both sides of Sargeant Street, from the railroad overpass to Main Street, due to the 3rd and 2nd Level Canals.
9. Both sides of Jackson Street, from the railroad overpass to Main Street, due to the 3rd and 2nd Level Canals.
10. Both sides of Main Street and islands, from beneath the Rt. 391 overpass to Jackson Street.
11. Both sides of Northampton Street, from St. Vincent Street north to the 2nd traffic light/entrance to the Stop & Shop Plaza, due the ground water collection area and wetlands.
12. Both sides of Holyoke Street and Whiting Farms Road, from Mall Drive to Jeane Drive, due to East Tannery Brook and wetlands.
13. Both sides of Cherry Street, from 100 feet south of the Homestead Avenue intersection to Maplecrest Circle.

Holyoke Planning Department 05/25/2010 dpw.apr