City of Lowell

2016 Yearly Operational Plan

Submitted by:
City of Lowell Department of Public Works

Prepared by:
Vegetation Control Service, Inc.

February 12, 2016

SUMMARY

A yearly operational plan (YOP) must be submitted to the Department of Agricultural Resources (DAR) every year herbicides are intended for use to maintain public ways (rights-of-way). The YOP provides a detailed program for vegetation management including the methods used to identify target vegetation and sensitive areas, planned treatment methods, herbicides and herbicides mixtures and rates for the year.

The companion to this YOP: A five year Vegetation Management Plan (VMP) is available for review at the office of the Department of Public Works.

Upon receipt of this YOP, the DAR publishes a notice in the Environmental Monitor. The City must also provide a copy of the proposed YOP and Environmental Monitor notice to the Board of Health, Conservation Commission, and Mayor. 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. A one page notice is also sent to the public water suppliers.

Public notification of herbicide application is made at least 21 days prior to the treatment(s) by a separate notice. This Notice is made to the Department of Agricultural Resources, Mayor, Board of Health, the Conservation Commission and the Municipal Public Water Supplier.

A newspaper notice will also be made at least 48 hours in advance of the start of the treatment program.

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.

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1. INTRODUCTION

In compliance with Commonwealth of Massachusetts' Rights-of-Way Vegetation Management Regulations (333 CMR 11.00) the City of Lowell's Yearly Operational Plan (YOP) details our vegetation management program for 2016. This YOP is consistent with the terms and procedures set forth in Lowell's 2015-2019 five-year Vegetation Management Plan (VMP); with the Massachusetts Pesticide Control Act (Chapter 132B); with all pertinent clauses in Chapter 85 of the Acts of 2000; and with all acts and regulations that apply to public-way (right-of-way) vegetation management.

Vegetation growing along curbing, within and around paved traffic islands, in cracks in the asphalt, under guiderails along roadways and in areas that cannot be mowed is of concern in Lowell. These areas, along with Poison Ivy, Japanese Knotweed and other public nuisance vegetation, can be effectively controlled with the use of herbicide applications.

Herbicide applications will be done under the supervision of an individual holding a DAR issued Category 40 pesticide license in compliance with 333 CMR 11.00 as detailed in the Integrated Vegetation Management (IVM) program and protocols described in Lowell's 2015-2019 VMP.

Lowell's IVM program is a combination of cultural, physical, mechanical, and chemical management techniques that control undesirable vegetation in an ecologically sound manner. As with all IVM programs, this program is designed to maximize control of undesirable vegetation while minimizing any potential impact to the environment.

2. THE INDIVIDUALS THAT WILL PERFORM AND SUPERVISE THE HERBICIDE APPLICATIONS

The City of Lowell DPW will supervise the herbicide applications. Application crews will be supervised by/consist of an individual with a DAR issued Category 40 pesticide license and any additional crew members will, at a minimum, hold DAR issued applicator pesticide licenses.

Supervisor:

Ralph G. Snow, P.E.
Public Works Commissioner
Department of Public Works
The City of Lowell
1365 Middlesex Street
Lowell, MA 01851
(978) 674-4111

Herbicide Applicators:

Municipal Pest Management Service
21 River Rd.
Newington, NH 03801

Vegetation Control Service, Inc.
2342 Main Street
Athol, MA 01331
(978) 249-5348

3. LOCATION OF INTENDED HERBICIDE TREATMENT(S)

The treatment areas include, but are not limited to, cracks in asphalt, along guiderails, along curbing, within and around paved traffic islands, between sidewalks and the adjacent curbing, and wherever vegetation is causing a public hazard.

Known sensitive areas are included on the Lowell Map in Appendix 1. Appendix 1 also contains a street listing to cover potential treatment locations for public nuisance and vegetation posing a risk to public safety.

Predicting the location of all target vegetation along public ways in advance of the active growing season is not possible or practical. In an effort to limit the application of herbicides only to areas that require treatment, the city will, therefore, conduct patrols and treat those areas in which vegetation poses a public nuisance and/or poses a safety risk to pedestrian or vehicular safety and which cannot be practically treated by the other methods listed in the VMP.

4. IDENTIFICATION OF TARGET VEGETATION

Target Vegetation:
Vegetation that poses a public nuisance and/or poses a safety risk to pedestrian or vehicular safety.

Nuisance Grass and Herbaceous Growth

In most instances grass is a desirable plant species. Along the shoulders of roads, grass growth is encouraged and maintained through mechanical mowing. However, in some instances, grasses and other herbaceous plants can be identified as targets in areas where they cause a safety risk. These areas include, but are not limited to along curbing, cracks in asphalt, along guiderails, within and around paved traffic islands, and between sidewalks and the adjacent curbing.

Public Nuisance Vegetation

Public nuisance vegetation includes, but is not limited to poisonous and noxious plant species growing along public ways that pose a health hazard. Noxious vegetation poses a risk to safety and health because of heavy thorns, dense foliage and/or impenetrable stems; examples include but are not limited to Multiflora Rose, Common and Glossy Buckthorn, and Blackberries. Although not the only target species of concern, Poison Ivy is the dominant poisonous plant community along public ways that requires control.

Vegetation Posing a Risk to Safety

Vegetation that hampers visibility or impedes movement along public ways often poses a risk to public safety. M.G.L. Chapter 87, Section 5 authorizes tree wardens to have control of "all public shade trees, shrubs, and growths" along public ways. This includes woody plant species and invasive species. A short list of examples includes all tree species considered "street trees", all shrubs, vines and more specifically, invasive species, particularly Autumn Olive, Japanese Knotweed, Bittersweet and Multiflora Rose. Please note that only vegetation under 12 feet tall may be foliar treated.

5. DEFINITION, IDENTIFICATION AND TREATMENT OF SENSITIVE AREAS

The general definition of sensitive areas regulated by 333 CMR 11.04 is as follows:

> …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.

Protecting these environmentally sensitive sites is accomplished by defining specific sensitive areas and establishing buffer zones and treatment restrictions within their borders according to Table 1 below. These sensitive areas consist of no-spray zones in which herbicide

use is prohibited, larger, limited spray areas where herbicide use is permitted under certain conditions.

Treatment in limited spray areas require the use of herbicides from the *Sensitive Area Materials List* available at: http://www.mass.gov/eea/agencies/agr/pesticides/rights-of-way-vegetation-management.html and following the application restrictions in 333 CMR 11.04; this includes applying "No more than the minimum labeled rate of herbicide for the appropriate site, pest, and application method."

TABLE 1: CONTROL STRATEGIES FOR SENSITIVE AREAS

Table Compiled by Jeffrey M. Taylor, Vegetation Control Service, Inc.

Sensitive Area	Limited Spray or No-Spray Areas (feet)	Control Method	Time Limits Between Treatment(s)
Public Ground Water Supplies	400'	Mechanical Only	None
Primary Recharge Area	Designated buffer zone or 1/2 mile radius	Mechanical, Approved Herbicides*	24 months
Public Surface Water Supplies (Class A & Class B)	100'	Mechanical Only	None
	100'-400'	Approved Herbicides	24 months
Tributary to Class A Water Source, within 400' upstream of water source	100'	Mechanical Only	None
	100'-400'	Approved Herbicides	24 months
Tributary to Class A Water Source, greater than 400' upstream of water source	10'	Mechanical Only	None
	10'-200'	Approved Herbicides	24 months
Class B Drinking Water Intake, within 400' upstream of intake	100'	Mechanical Only	None
	100'-200'	Approved Herbicides	24 months
Private Drinking Water Supplies	50'	Mechanical Only	None
	50'-100'	Approved Herbicides	24 months
Surface Waters	10'	Mechanical Only	None
	10'-100'	Approved Herbicides	12 months
Rivers	10' from mean annual high water line	Mechanical Only	None
	10'-200'	Approved Herbicides	12 months
Wetlands	10'	Mechanical Only	None
	100' or with approved Wetlands Determination 10'-100' [per 310 CMR 0.05(3)(a) & 310 CMR 0.03(6)(b)]	Low-pressure Foliar, CST, Basal, Approved Herbicides	24 months
Inhabited Areas	100'	Approved Herbicides	12 months
Agricultural Area (Crops, Fruits, Pastures)	100'	Approved Herbicides	12 months
Certified Vernal Pools	10'	Mechanical Only when water is present	None
Certified Vernal Pool Habitat	10'-outer boundary of habitat	No treatment without approval	
Priority Habitat	No treatment outside the 4 foot paved road exemption without approval of the Natural Heritage Endangered Species Program (NHESP)		

*Massachusetts Approved herbicides for sensitive sites

Identification Methods

As appropriate, sensitive areas will be identified and marked in the field by qualified individuals.

Two simple descriptions guide the complex identification of the sensitive areas defined in 333 CMR 11.04: *Readily identifiable in the field* and *Not readily identifiable in the field.* Readily identifiable in the field areas will be treated, identified and when appropriate, marked according to all applicable restrictions listed in 333 CMR 11.00. Not readily identifiable in the field areas will likewise be marked and treated when appropriate, but they are identified by the use of data marked on maps and collected in the YOP and notification processes before the time of treatment.

The individuals assigned the task of identifying and treating sensitive areas will use the appropriate sources and methods from the following list:

- City maps, records and institutional knowledge
- Massachusetts Department of Environmental Protection water supply maps available through MassGIS (http://www.mass.gov/mgis/)
- Water Department, DAR and Lowell Board of Health maps and lists of identified private wells along the ROW
- Correspondence, meetings and input—from the mayor, board of health, conservation commission, public water suppliers and the public—within the forty-five day YOP and twenty-one day municipal right-of-way notification letter review and comment periods and the 48 hour newspaper notification (under 333 CMR 11.06 & 11.07 and Chapter 85 of the Acts of 2000)
- A point person who verifies, identifies and where appropriate marks sensitive areas and any additional areas that may require special precautions
- USGS topographical maps
- Information from MassGIS
- When necessary, confidential information from NHESP
- A copy of the YOP and VMP.

6. PROPOSED HERBICIDE TREATMENT METHODS

Lowell's VMP describes a number of proposed treatment methods, but for 2016 the herbicide program will consist of the following:

Chemical (Herbicide Applications) Methods

1. **Foliar Treatments:** the selective application of herbicides diluted in water, to the foliage of target vegetation. Two types of equipment for foliar treatments are used: back pack and vehicle mounted. Both treatments use low pressure at the nozzle, for applications. Foliar applications take place when leaves are fully developed in the spring until early fall and the beginning of leaf abscission—i.e., when leaves begin dropping off the vegetation.

a. **Back pack sprayers** include hand pump or motorized back pack sprayer or squirt bottles. This technique is excellent for spot treatments, such as localized Poison Ivy infestations. It is not as effective as other vegetation management methods on tall, high density target vegetation.

b. **Vehicle mounted sprayers** use truck or tractor mounted equipment that delivers the herbicide solution through nozzles attached to a hose or boom-mounted apparatus. The herbicide solution uses a water based herbicide mixture from a tank and pump on the application vehicle. This technique is used along roadways that have good access and where obstructions, terrain or site sensitivity do not exclude the equipment.

2. **Pre-emergent Treatments:** the use of pre-emergent herbicides using the same equipment described in the foliar treatments above. Pre-emergent applications are used where season long vegetation control requires "vegetation-free conditions" such as along curbing, sidewalks, under guiderails/guardrails and on paved traffic islands. Usually, pre-emergent treatments are used in conjunction with foliar applications, unless the goal is to prevent the growth of vegetation in the spring, to reduce the amount of applied herbicides and applications. This method is used from the early spring to early fall.

3. **Cut Stump Treatment (CST):** the mechanical cutting of target species followed by an herbicide treatment to the phloem and cambium tissue of the stumps. CST treatments prevent re-sprouts, thereby reducing the need to re-treat the same vegetation. The CST mixture is diluted in water or a non-freezing agent and is ideally made to freshly cut stumps. Application equipment includes low-volume, backpack, hand-pump sprayers, hand held squirt bottles, paintbrushes, or sponge applicators. This method is used where maximum control is desirable, to reduce the visual impact of vegetation management treatments and/or to reduce the potential of adverse impacts to desirable vegetation because of its selectivity. CST may be used at any time of the year provided snow depths do not prevent cutting the stumps below three inches in height. It is best to avoid the season of high sap flow, or in moderate to heavy rains. It is not practical in moderate to heavy stem densities.

Final Note: Anti-drift Adjuvants are added to the mix or solution in foliar and pre-emergent applications because they help reduce the potential exposure to non-target organisms, reduce the break-up of sprays into fine droplets, and increase selectivity and herbicide deposition onto target plants.

7. PROPOSED HERBICIDES, CARRIERS, ADJUVANTS AND RATES

Lowell will only use the Commonwealth of Massachusetts recommended herbicides from the *Sensitive Area Materials List* listed below. Complete information on these products is included in Appendix 2, Fact Sheets and Appendix 3, Labels.

Table 2: Tank Mix #1 for Curbing, Cracks, Guiderail, Traffic Island Treatments (General Foliar Weed Control)

Herbicides & Adjuvants	Active Ingredient	EPA Registration Number(s)	Mix Concentration (per 100 gals. water)
Rodeo	Glyphosate	62719-324	2-5%
Oust Extra	Sulfometuron Methyl and Metsulfuron-Methyl	352-622 or 432-1557	10 oz (applied at a volume of 15-30 gals per acre)
Induce, Clean Cut, or equivalent surfactant[1]	not applicable	n.a.	0.125%-1%
Point Blank, 41A, Clasp, or equivalent drift retardant[1]	n.a.	n.a.	4-16 oz.
Carrier: Water	n.a.	n.a.	n.a.

Table 3: Tank Mix #2 for Poison Ivy, Noxious and Invasive Species

Herbicides & Adjuvants	Active Ingredient	EPA Registration Number(s)	Mix Concentration (per 100 gals. water)
Rodeo	Glyphosate	62719-324	2-5%
Escort XP or Patriot	Metsulfuron-Methyl	352-439, 432-1549 or 228-391	1.25-4 oz.
Induce, Clean Cut, MSO or equivalent surfactant[1]	not applicable	n.a.	0.125%-1%
Point Blank, 41A, Clasp or equivalent drift retardant[1]	n.a.	n.a.	4-16 oz.
Carrier: Water	n.a.	n.a.	n.a.

Table 4: Tank Mix #3 for Poison Ivy

Herbicides & Adjuvants	Active Ingredient	EPA Registration Number(s)	Mix Concentration (per 100 gals. water)
Garlon 4 Ultra	Triclopyr	62719-527	2-4%
Induce, Clean Cut, MSO, or equivalent surfactant[1]	n.a.	n.a.	0.125%-1%
Point Blank, Clasp, or equivalent drift retardan[1]t	n.a.	n.a.	4-16 oz.

[1] Equivalent surfactants, drift retardants and basal oils will used in case those listed are no longer available or more effective alternatives become available.

Table 5. Tank Mixes #4 for Low Volume Foliage Applications

Herbicides & Adjuvants	Active Ingredient	EPA Registration Number(s)	Mix Concentration (per 100 gals. water)
Rodeo	Glyphosate	62719-324	3-5%
Krenite S	Fosamine Ammonium	42750-247	6-10%
Escort XP or Patriot	Metsulfuron-Methyl	352-439, 432-1549 or 228-391	2-4 oz.
Arsenal Powerline or Polaris	Imazapyr[2]	241-431 or 228-534	0.125%-.5%
Induce, Clean Cut, MSO, or equivalent surfactant[1]	n.a.	n.a.	0.125%-1%
Point Blank, Clasp, or equivalent drift retardant[1]	n.a.	n.a.	6-64 oz.

Table 6. Tank Mix #5 for Cut Surface Treatment (CST) Applications

Herbicides & Adjuvants	Active Ingredient	EPA Registration Number(s)	Mix Concentration (per 100 gals.)
Rodeo	Glyphosate	62719-324	40% to 50%
Arsenal Powerline or Polaris	Imazapyr[2]	241-431 or 228-534	3%-5% (mixed with Rodeo)
Carriers: Water or Windshield Washing Fluid	n.a.	n.a.	n.a.

8. HANDLING, MIXING AND LOADING HERBICIDE CONCENTRATES

All herbicides will be handled, mixed and applied strictly in compliance with all applicable federal and state laws and regulations. All herbicide mixing will be done at the DPW garage or contractor's facilities and extreme care shall be exercised during all mixing, handling and loading in order to prevent careless spills or splashes. No herbicide concentrates will be mixed, handled or loaded within one hundred feet of a sensitive area.

Although it is expected that all the mixed herbicide will be used, any remaining will be stored in accordance with manufacturer's instructions.

9. ALTERNATE CONTROL TECHNIQUES

Decisions on the appropriate control techniques are made following the IVM Protocol in the VMP, for convenience sake, repeated below:

***Monitoring**:* All public ways will be surveyed prior to any scheduled treatment program. Monitoring will be conducted by foot or by vehicle. Monitoring of areas may also result from public requests.

[2]Imazapyr will not be applied on the same location in two consecutive years.

Maintenance: Roads will be cleaned using a street sweeper. Cracking asphalt and sidewalks and other right-of-way defects will be repaired and ditches will be cleaned. Where appropriate, the use of ground cover will be encouraged to assist in the prevention of undesirable target vegetation growth.

Direct Vegetation Control Methods: The decision to use one or a combination of IVM techniques will take into consideration the cultural uses of the landscape. The direct IVM management tactics selected will control nuisance vegetation in an environmentally responsible and efficient manner:

A. Mechanical Controls

1. Hand Cutting
2. Mowing
3. Selective Pruning

B. Chemical Controls

1. Foliar Treatments
2. Pre-emergent Treatments
3. Cut Stump Treatments.

Record Keeping: A log of surveyed areas will be kept for future planning and reference purposes. Areas maintained either through physical repair, mechanical or chemical control will be recorded by the DPW for at least 3 years.

10. TREATMENT RECORDS

The Category 40 applicator must complete daily vegetation management reports that include:

A. Date, name and address of certified applicator(s)
B. Identification of site or work area
C. List of crew members
D. Type of equipment and hours used
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.

11. REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS

This section is offered as a general procedural guide for responding to chemical spills or related accidents (related accidents include but are not limited to fire, poisoning and vehicle accidents). The following is, therefore, a guide to the items that will be available to the applicator on site in the event of a chemical spill or emergency.

Although education and attention will constantly be directed at accident and spill prevention, in the event of a spill, immediate action will be taken to contain the spill and protect the spill area (Appendix 4: *Herbicide Spill Check List* shall be available on-site to the applicator). Until completely clean, the spill area will be protected by placing barriers, flagging or crew members at strategic locations, as appropriate. 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 placed 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 into leak proof containers for proper disposal. When applicable, all contaminated soil will be placed in leak proof containers, removed from the site and disposed of properly. When applicable, activated charcoal will be incorporated into the soil at the spill location at a rate of several pounds per thousand square feet to inactivate any herbicide residue. Any spill will be reported to the DAR Pesticide Division.

The Massachusetts Department of Environmental Protection 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.

Types of Chemical Spills that Require Action

Chemicals include, but are not limited to the following:

- Herbicides
- Bar and Chain Oil
- Motor and Hydraulic Oil/Fluids
- Diesel Fuel
- Gasoline
- Title 3 Hazmat Materials

Required Spill Response Equipment

As a minimum, the treatment crew will have available on the job site:

- YOP with Emergency Contact List
- SDS (Safety Data Sheet)
- Product Label
- Product Fact Sheets (when applicable)
- Appropriate Adsorbent Material
- Shovel
- Broom
- Flagging
- Leak Proof Container
- Heavy-duty Plastic Bags

Personal Contact

In the event of **Personal Contact** with hazardous chemicals:

- Wash affected area with plenty of soap and water
- Change clothing which has absorbed hazardous chemicals
- If necessary, contact a physician
- If necessary, contact the proper emergency services
- If necessary, follow the procedures for Major or Minor Spills as outlined in Appendix 5
- Avoid breathing the fumes of hazardous chemicals

Reference Tables (information subject to change as necessary)

Table 7: Herbicide Manufacturers

MANUFACTURER	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
Albaugh Inc.	(800) 247-8013	
BASF Corporation	(800) 832-4357	
Bayer Environmental Science	(800) 334-7577	
Dow Agro Sciences	(800) 992-5994	
Monsanto	(314) 694-4000	
Nufarm	(877) 325-1840	Medical Emergencies
PBI/Gordon Industrial	(877) 800-5556	Medical Emergencies

Table 8: State Agencies

STATE AGENCY	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
Massachusetts Pesticide Bureau	(617) 626-1700	A.S.A.P. (within 48 hours)
Massachusetts Department of Environmental Protection, Emergency Response Section	Main Office: (888) 304-1133 Northeast Region: (978) 694-3200	For emergencies involving reportable quantities of hazardous materials; required info: City/town, street address, site name (if applicable), material
Massachusetts Dept of Public Health, Bureau of Env.Health Assessment Toxilicology Program	(617) 624-5757	
Massachusetts Poison Information Centers	(800) 682-9211	For medical emergencies involving suspected or known pesticide poisoning symptoms

Table 9: Emergency Services

EMERGENCY SERVICE	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
Lowell Fire/ Police Department	911	
ChemTrec	(800) 424-9300	
Clean Harbors	(800) OIL-TANK	
Pesticide Hotline	(800) 858-7378	PST: 6:30 am-4:30 pm, web: www.NPIC.orst.edu

City of Lowell contact in the case of a spill or accident:

Ralph G. Snow, P.E.
Public Works Commissioner
Department of Public Works
The City of Lowell
1365 Middlesex Street
Lowell, MA 01851
t: (978) 674-4111

APPENDIX 1:
MAP AND STREET LISTINGS

City of Lowell 2016 Yearly Operational Plan

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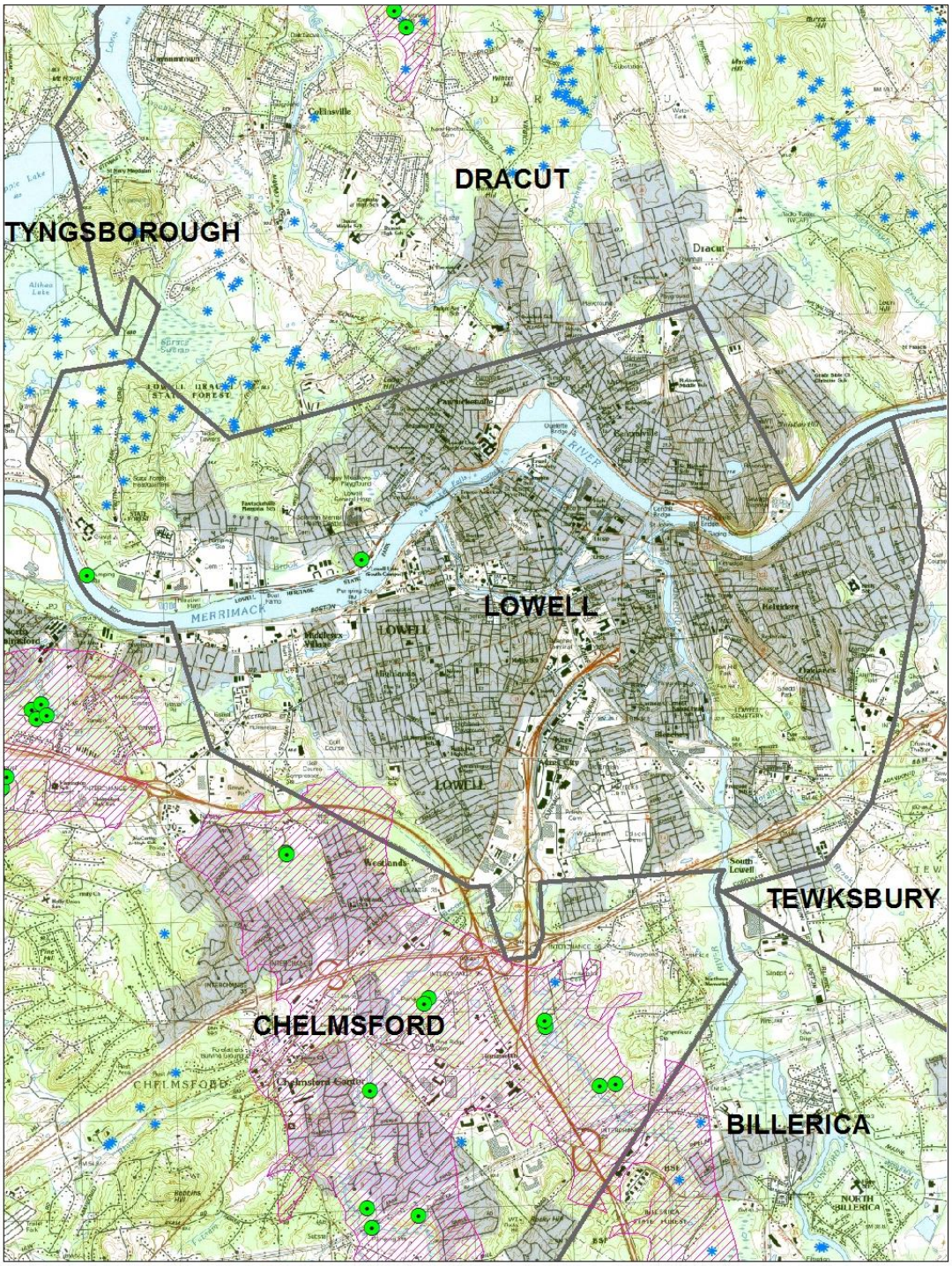
W E
S
1:36,000

Legend

- Public Wells
- NHESP Certified Vernal Pools
- Zone II
- Zone A
  (identifies surface waterbodies, tributaries and associated water bodies, Tobyn Sensitive Area treatment methods per 333 CMR 11.04)

0 0.5 1 2 Miles



Source: "Office of Geographic and Environmental Information (Mass GIS), Commonwealth of Massachusetts, Executive Office of Energy and Environmental Affairs".
Public Water Supply data provided by MA DEP Drinking Water Program, October 2015, DEP Public Water Supplies

February 15, 2016

LOWELL STREET NAMES			
A STREET	DANE AVENUE	JUNE STREET	RICHMOND AVENUE
ABBOTT STREET	DANE STREET	JUNIPER STREET	RICHMOND STREET
ABERDEEN STREET	DANIELS STREET	KANTELES AVENUE	RIDGE ROAD
ACADEMY DRIVE	DARTMOUTH STREET	KAREN STREET	RINDO PARK DRIVE
ACORN STREET	DAVIDSON STREET	KATHERINE DRIVE	RITA STREET
ACROPOLIS ROAD	DAVIS STREET	KATHLEEN CIRCLE	RIVER PLACE
ACTON STREET	DAVIS WAY	KATHLETTA STREET	RIVER ROAD
ADAM TERRACE	DAYTON STREET	KEARNEY DRIVE	RIVERBY STREET
ADAMS AVENUE	DEAN DRIVE	KEENE STREET	RIVERCLIFF ROAD
ADAMS STREET	DECATUR AVENUE	KELLEY CIRCLE	RIVERS EDGE ROAD
AEGEAN LANE	DECATUR STREET	KENSINGTON STREET	RIVERSIDE AVENUE
AGAWAM STREET	DEERFIELD STREET	KERRY STREET	RIVERSIDE STREET
AGNES ROAD	DELARD STREET	KILDEER LANE	RIVERVIEW AVENUE
AIKEN AVENUE	DELAWARE AVENUE	KIMBALL AVENUE	RIVERWALK WAY
AIKEN STREET	DELMONT AVENUE	KING STREET	ROAD ONE
ALBERT STREET	DEMPSEY PLACE	KINO ROAD	ROBBINS STREET
ALBION PLACE	DENTON STREET	KINSMAN STREET	ROBERT PLACE
ALBION STREET	DESCHENEAUX DRIVE	KIRK STREET	ROBERT STREET
ALCOTT STREET	DESROSIERS STREET	KLIANTHI DRIVE	ROBERTA LANE
ALDER STREET	DEVINE AVENUE	KNAPP AVENUE	ROBESON STREET
ALICE DRIVE	DEVLINS AVENUE	KRIKOR STREET	ROBIN LANE
ALLEN STREET	DEVONSHIRE CROSSING	KYAN STREET	ROBINSON STREET
ALMA STREET	DINGWELL STREET	L STREET	ROCK STREET
ALMONT STREET	DINSMORE STREET	LAFAYETTE STREET	ROCKDALE AVENUE
ALTON STREET	DIX STREET	LAGRANGE COURT	ROCKINGHAM AVENUE
ALYSSA DRIVE	DOANE STREET	LAKEVIEW AVENUE	ROCKINGHAM STREET
AMES PLACE	DOHERTY COURT	LALLAS LANE	ROGERS AVENUE
AMES STREET	DONALD TERRACE	LAMB STREET	ROGERS STREET
AMORY STREET	DOUGLAS ROAD	LANE STREET	RONALD LANE
AMOS AVENUE	DOUGLAS TERRACE	LANE STREET COURT	ROOSEVELT PLACE
ANDERSON STREET	DOVER STREET	LAPLUME AVENUE	ROPER STREET
ANDERSON STREET CT	DOWLING DRIVE	LAUREL STREET	ROSE AVENUE
ANDOVER STREET	DOWNEAST CROSSING	LAUREN WAY	ROSEMONT STREET
ANDREWS STREET	DRACUT STREET	LAURIAT STREET	ROSEWOOD LANE
ANGLE STREET	DRAPER STREET	LAURIE LANE	ROSS AVENUE
ANSON STREET	DUBLIN STREET	LAWN AVENUE	ROURKE BRIDGE
APPLETON PLACE	DUDLEY COURT	LAWRENCE DRIVE	ROYAL STREET
APPLETON STREET	DULGARIAN TERRACE	LAWRENCE STREET	ROYALSTON AVENUE
ARBOR ROAD	DUMERLE STREET	LAWSON STREET	RULE LANE
ARCADIA AVENUE	DUMMER STREET	LAWTON STREET	RUMFORD STREET

LOWELL STREET NAMES			
ARCAND DRIVE	DUNBAR AVENUE	LEDGE WAY	RUNDLETTS COURT
ARCH STREET	DUNDEE STREET	LEE STREET	RUSSELL STREET
ARDELL STREET	DUNFEY STREET	LEEDS STREET	RUTH AVENUE
ARLENE ROAD	DURANT STREET	LENOX STREET	RUTH STREET
ARLINGTON AVENUE	DUREN AVENUE	LEONARD CIRCLE	RUTLAND STREET
ARLINGTON STREET	DUTTON AVENUE	LEROY STREET	SAGAMORE STREET
ARMAND AVENUE	DUTTON STREET	LEVERETT STREET	SAINT JAMES STREET
ARNOLD AVENUE	E STREET	LEWIS STREET	SAINT PAUL STREET
ARTHUR AVENUE	EAGLE COURT	LEXINGTON AVENUE	SALEM STREET
ARTHUR STREET	EAST ALDEA STREET	LIBERTY STREET	SAMUEL STREET
ASH STREET	EAST AVENUE	LIGHT AVENUE	SANBORN STREET
ASHLAND STREET	EAST BURNSIDE AVENUE	LILLEY AVENUE	SANDERS AVENUE
ASTOR STREET	EAST DURANT STREET	LILLIAN STREET	SANDY LANE
ATHENS DRIVE	EAST MEADOW LANE	LINCOLN PARKWAY	SARAH AVENUE
ATLANTIC STREET	EAST MEADOW ROAD	LINCOLN STREET	SARATOGA STREET
AUBURN STREET	EAST MERRIMACK STREET	LINDA LANE	SARGENT STREET
AUSTIN STREET	EAST NINETEENTH STREET	LINDEN STREET	SAUNDERS STREET
AUTUMN STREET	EAST PINE STREET	LINWOOD STREET	SAWTELLE PLACE
AVALON STREET	EAST RICHARDSON STREET	LIPTON STREET	SAYLES STREET
AVENUE A	EAST SIXTH STREET	LISA LANE	SCHOOL STREET
AVENUE B	EASTON STREET	LITCHFIELD TERRACE	SECOND AVENUE
AVENUE C	EASTVIEW STREET	LIVINGSTON AVENUE	SECOND STREET
AVERY STREET	EASY STREET	LIVINGSTON STREET	SENECA STREET
AVON PLACE	EATON STREET	LLEWELLYN STREET	SEVENTEENTH STREET
AVON STREET	ECKLUND DRIVE	LOCUST STREET	SEVENTH AVENUE
AYER AVENUE	EDDY STREET	LOMBARD STREET	SEVENTH STREET
B STREET	EDGEWOOD STREET	LONDON STREET	SHADOW DRIVE
BACHELDER STREET	EDSON STREET	LONGMEADOW DRIVE	SHAFFER STREET
BACHMAN STREET	EDWARDS STREET	LORD OVERPASS	SHARYN CIRCLE
BAGLEY AVENUE	EIGHTEENTH STREET	LORING STREET	SHATTUCK STREET
BAILEY LANE	EIGHTH AVENUE	LOUISE STREET	SHAW STREET
BALDWIN STREET	EIGHTH STREET	LOWELL CONNECTOR	SHAWMUT AVENUE
BALTIMORE AVENUE	ELEANOR DRIVE	LOWELL CROSSING	SHEA STREET
BARASFORD AVENUE	ELENE STREET	LOWELL RESEARCH CTR DR	SHEDD STREET
BARBARA STREET	ELEVENTH STREET	LOWELL STREET	SHELDON STREET
BARBARA TERRACE	ELIZIA DRIVE	LOWES WAY	SHEPARD STREET
BARCLAY STREET	ELJER DRIVE	LUCE STREET	SHERMAN STREET
BARKER AVENUE	ELLIOTT DRIVE	LUDLAM STREET	SHIRLEY AVENUE
BARKER STREET	ELLIOTT STREET	LUND STREET	SHORT STREET
BARRINGTON STREET	ELLIS AVENUE	LUNDBERG STREET	SIDNEY STREET

LOWELL STREET NAMES			
BARROWS STREET	ELLSWORTH STREET	LUPINE ROAD	SILVER STREET
BARTLETT STREET	ELM STREET	LUPINE STREET	SIMPSON STREET
BARTON AVENUE	ELMONT ROAD	LURA STREET	SIXTH AVENUE
BASSETT STREET	ELMWOOD AVENUE	LUZ DRIVE	SIXTH STREET
BAY STREET	EMERY AVENUE	LYONS STREET	SKYLINE DRIVE
BAYBERRY DRIVE	EMERY STREET	MADISON STREET	SLADEN STREET
BEACON STREET	EMMETT WAY	MADONNA CIRCLE	SMITH AVENUE
BEACON TERRACE	ENDICOTT STREET	MAGNOLIA STREET	SMITH STREET
BEATRICE AVENUE	ENFIELD STREET	MAIN STREET	SOLOMONT WAY
BEAUDRY STREET	ENGLAND STREET	MAITLAND AVENUE	SOMERSET STREET
BEAULIEU STREET	ENNELL STREET	MALDEN AVENUE	SOUTH CANTON STREET
BEAVER STREET	EPIRUS DRIVE	MAMMOTH ROAD	SOUTH FRANKLIN COURT
BEDFORD AVENUE	EPPING STREET	MANAHAN STREET	SOUTH HIGHLAND STREET
BEECH STREET	ESSEX STREET	MANCHESTER STREET	SOUTH LORING STREET
BEHARRELL AVENUE	ETTA ROAD	MANNING DRIVE	SOUTH RIDGE CIRCLE
BELLE AVENUE	EUGENE STREET	MANSFIELD ROAD	SOUTH STREET
BELLEVUE STREET	EUSTIS AVENUE	MANSION DRIVE	SOUTH WALKER STREET
BELMONT AVENUE	EVERETT STREET	MANSUR STREET	SOUTH WHIPPLE STREET
BELMONT STREET	EVERGREEN ROAD	MANUFACTURERS STREET	SOUTH WILDER STREET
BELROSE AVENUE	EXCHANGE PLACE	MAPLE PLACE	SPALDING STREET
BELVIDERE CIRCLE	EXECUTIVE DRIVE	MAPLE STREET	SPARKS STREET
BENNETT STREET	EXETER STREET	MAPLEVIEW AVENUE	SPENCER STREET
BENNINGTON TERRACE	FACTORY STREET	MAQUILLA STREET	SPRAGUE AVENUE
BENTON STREET	FAIRFAX STREET	MARGELET STREET	SPRING AVENUE
BERKELEY AVENUE	FAIRFIELD STREET	MARGINAL STREET	SPRING STREET
BERNICE AVENUE	FAIRGROVE AVENUE	MARIPOSA AVENUE	STACKPOLE STREET
BERNIER STREET	FAIRLAWN STREET	MARKET STREET	STAFFORD ROAD
BERRY ROAD	FAIRMOUNT STREET	MARLBOROUGH STREET	STANDISH STREET
BERTHA STREET	FAIRVIEW STREET	MARRINER STREET	STANLEY AVENUE
BERTRAM STREET	FANNING STREET	MARSH STREET	STANLEY STREET
BERWICK STREET	FARMLAND ROAD	MARSHALL AVENUE	STAPLES STREET
BEVERLY PLACE	FARNHAM STREET	MARSHALL ROAD	STARBIRD STREET
BICKFORD AVENUE	FARRAGUT STREET	MARSHALL STREET	STARR AVENUE
BIGELOW STREET	FATHER JOHN SARANTOS WY	MARSHALL TERRACE	STATE STREET
BILLERICA STREET	FATHER MORISSETTE BLVD	MARSTON STREET	STAVELEY STREET
BILLINGS STREET	FATHER RONAN TERRACE	MARTIN LUTHER KING JR WY	STEDMAN STREET
BIRCH STREET	FAULKNER STREET	MARTIN STREET	STEVENS STREET
BISHOP STREET	FAUVEL DRIVE	MARY THERESA TERRACE	STEWART STREET
BLACKBROOK DRIVE	FAVOR STREET	MARYL DRIVE	STOCKBRIDGE AVENUE
BLINKHORN AVENUE	FAY STREET	MARYLAND AVENUE	STRATHAM STREET

LOWELL STREET NAMES			
BLODGETT STREET	FAYETTE STREET	MASSACHUSETTS MILLS DR	STROMQUIST AVENUE
BLOSSOM COURT	FELKER STREET	MASSASOIT STREET	SUFFOLK COURT
BLOSSOM STREET	FELTON STREET	MAUDE STREET	SUFFOLK STREET
BLUEBIRD TERRACE	FENWICK TERRACE	MAY STREET	SUMMER STREET
BODWELL AVENUE	FERNALD STREET	MCGOVERNS COURT	SUMMIT STREET
BOISVERT STREET	FERRY LANE	MCGUIGAN CIRCLE	SUPRENANT STREET
BOLT STREET	FETHERSTON AVENUE	MCINTIRE STREET	SURREY LANE
BOLTON STREET	FIDLER TERRACE	MCKINLEY AVENUE	SUTHERLAND STREET
BOND STREET	FIFTH AVENUE	MCOSKER CIRCLE	SUTTLE STREET
BOSTON ROAD	FIFTH STREET	MEAD STREET	SWAN STREET
BOULEVARD STREET	FIRST STREET	MEADOW DRIVE	SWIFT STREET
BOURNE STREET	FISHER STREET	MEADOWCROFT STREET	SYCAMORE STREET
BOWDEN STREET	FLEMING STREET	MEADOWVIEW DRIVE	TALBOT STREET
BOWERS STREET	FLETCHER STREET	MECHANICS STREET	TAMARACK STREET
BOWL ROAD EXTENSION	FLORENCE AVENUE	MEGHANN LANE	TANNER STREET
BOYLSTON LANE	FLORENCE ROAD	MELROSE AVENUE	TAUNTON COURT
BOYLSTON STREET	FLORENCE STREET	MELTON STREET	TECHNOLOGY DRIVE
BOYNTON STREET	FLORIDA STREET	MEREDITH AVENUE	TEMPLE STREET
BRADFORD PLACE	FLOYD STREET	MERRILL AVENUE	TENTH STREET
BRADLEY STREET	FOCH STREET	MERRILL STREET	TERRY AVENUE
BRADSTREET AVENUE	FOREST PARK LANE	MERRIMACK STREET	THAYER STREET
BRANCH PLACE	FOREST STREET	METHUEN STREET	THIRD AVENUE
BRANCH STREET	FOREST VIEW AVENUE	MIDDLE STREET	THIRD STREET
BRATTLE STREET	FORT HILL AVENUE	MIDDLESEX PARK	THIRTEENTH STREET
BRIAN ROAD	FOSTER STREET	MIDDLESEX STREET	THOMPSONS COURT
BRIAR AVENUE	FOUNDRY STREET	MIDLAND STREET	THORNCLIFF AVENUE
BRIARWOOD ROAD	FOURTH AVENUE	MILL STREET	THORNDIKE ROAD
BRICKETT AVENUE	FOURTH STREET	MILL STREET COURT	THORNDIKE STREET
BRIDGE STREET	FOWLER ROAD	MIRIAM LANE	THORNTON AVENUE
BRIDGET LANE	FOX STREET	MISSION PLACE	TIFFANY DRIVE
BRISTOL STREET	FRANCIS P MCGEE WAY	MITCHELLS AVENUE	TILTON STREET
BROADVIEW ROAD	FRANK TERRACE	MONADNOCK AVENUE	TODD STREET
BROADWAY STREET	FRANKLIN STREET	MONARCH STREET	TOLMAN AVENUE
BROOKFIELD STREET	FRECHETTE STREET	MONTGOMERY AVENUE	TOTMAN STREET
BROOKINGS STREET	FRED STREET	MONTREAL STREET	TOUPI LANE
BROOKS STREET	FREDA LANE	MONTVIEW AVENUE	TOWER DRIVE
BROOKSIDE STREET	FREEDOM WAY	MOODY STREET	TOWNSEND AVENUE
BROUGHTON AVENUE	FREMONT STREET	MOORE AVENUE	TREMONT PLACE
BROWN STREET	FRENCH STREET	MOORE STREET	TROTTING PARK ROAD
BROWNS COURT	FRONT STREET	MOREY PLACE	TROY STREET

LOWELL STREET NAMES			
BROX ROAD	FROTHINGHAM STREET	MOREY STREET	TRULL LANE
BRUNSWICK STREET	FRUIT STREET	MORNINGSIDE DRIVE	TRULL LANE EAST
BUNKER HILL STREET	FRYE STREET	MORNINGVIEW AVENUE	TRULL LANE WEST
BURGESS STREET	FULTON AVENUE	MORSE STREET	TULIP LANE
BURLINGTON AVENUE	FULTON STREET	MORT AVENUE	TWELFTH STREET
BURNABY STREET	GAGE AVENUE	MORTON STREET	TWENTIETH STREET
BURNHAM ROAD	GAGE ST	MOUNT GROVE STREET	TWISS STREET
BURNS STREET	GAGNON ROAD	MOUNT HOPE STREET	TYLER PARK
BURNSIDE STREET	GALLAGHER SQUARE	MOUNT PLEASANT STREET	TYNG STREET
BURRILL PLACE	GALLIGAN ROAD	MOUNT VERNON STREET	UNION STREET
BURTON STREET	GALVIN STREET	MOUNT WASHINGTON ST	UNIVERSITY AVENUE
BURTT STREET	GARDEN ROAD	MUNROE STREET	UNSWORTH STREET
BUTLER AVENUE	GARDNER AVENUE	MURRAY LANE	UPHAM STREET
BUTLER DRIVE	GARNET STREET	MYRTLE STREET	URSULA STREET
BUTMAN PLACE	GASTON TERRACE	NATCHEZ STREET	USHER STREET
BUTMAN ROAD	GATES STREET	NELSON AVENUE	UTICA STREET
BUTTERFIELD STREET	GAUDREAU STREET	NELSON STREET	VAN GREENBY ROAD
BY STREET	GEANA LANE	NESMITH STREET	VARNEY STREET
C STREET	GENEST AVENUE	NEW CASTOR DRIVE	VARNUM AVENUE
CABOT STREET	GEORGE STREET	NEW SPAULDING STREET	VARNUM PLACE
CADDELL AVENUE	GEORGIA AVENUE	NEW STREET	VARNUM STREET
CADY STREET	GERSHOM AVENUE	NEW WAY	VARNUM TERRACE
CALEB STREET	GERSON TERRACE	NEW YORK STREET	VAUGHAN STREET
CALVIN STREET	GERTRUDE AVENUE	NEWBRIDGE ROAD	VERITAS AVENUE
CAMBRIDGE PLACE	GIBSON ROAD	NEWBURY STREET	VERNON STREET
CAMBRIDGE STREET	GIBSON STREET	NEWELL STREET	VFW HIGHWAY
CAMPAW STREET	GILBRIDE TERRACE	NEWHALL STREET	VETERANS WAY
CAMPBELL DRIVE	GILMORE STREET	NICHOLS STREET	VICTOR STREET
CANADA STREET	GLENELLYN ROAD	NICOLE DRIVE	VICTORIA STREET
CANAL STREET	GLENELLYN ROAD WEST	NICOLLET STREET	VILES AVENUE
CANNINGTON STREET	GLENMERE STREET	NIGHTINGALE TERRACE	VILLAGE STREET
CANTERBURY STREET	GLENN ROAD	NINETEENTH STREET	VINCENT STREET
CANTON STREET	GLENWOOD STREET	NINTH STREET	VIOLA STREET
CARDINAL OCONNELL PARKWAY	GLIDDEN AVENUE	NOB WAY	VIRGINIA AVENUE
CARL STREET	GOLD STREET	NORCROSS STREET	WACHUSETT STREET
CARLISLE STREET	GORHAM STREET	NORTH BILLERICA ROAD	WAITE STREET
CARLTON STREET	GORMAN STREET	NORTH FRANKLIN COURT	WALDEN STREET
CARLY WAY	GOWARD PLACE	NORTH LLEWELLYN STREET	WALDO STREET
CARMINE STREET	GRACE AVENUE	NORTH STREET	WALKER AVENUE
CAROLYN STREET	GRACE STREET	NORWOOD STREET	WALKER PLACE

LOWELL STREET NAMES			
CARRIAGE DRIVE	GRAFTON STREET	NOTTINGHAM STREET	WALKER STREET
CARROLL PARKWAY	GRAND STREET	OAK AVENUE	WALNUT STREET
CARTER AVENUE	GRANDVIEW STREET	OAK KNOLL ROAD	WALSH STREET
CARTER STREET	GREEN STREET	OAK STREET	WALTON STREET
CASCADE AVENUE	GREENDALE AVENUE	OAKLAND STREET	WAMESIT COURT
CASCO STREET	GREENFIELD STREET	OBERLIN AVENUE	WAMESIT STREET
CASHIN STREET	GREENWOOD STREET	OBRIEN TERRACE	WANNALANCIT STREET
CASTER STREET	GRIFFIN STREET	OCONNELL STREET	WARE STREET
CASTLE ROAD	GROSVENOR STREET	OCONNOR DRIVE	WARNOCK STREET
CEDAR LANE	GROTON STREET	OHEIR WAY	WARREN COURT
CEDAR STREET	GROVE STREET	OLD FERRY ROAD	WARREN STREET
CEDAR STREET COURT	GROVES AVENUE	OLDE CANAL DRIVE	WARWICK STREET
CENTRAL STREET	GUILD STREET	OLIVE STREET	WASHER STREET
CENTRE STREET	GUMPUS ROAD	OLIVER STREET	WASHINGTON PARKWAY
CHAMBERLAIN STREET	HADLEY STREET	OLNEY STREET	WASHINGTON STREET
CHAMBERS STREET	HAINES AVENUE	ONEIL STREET	WATERFORD STREET
CHAPEL STREET	HALE STREET	ORCHARD STREET	WATSON AVENUE
CHARANT ROAD	HALL PLACE	ORFORD STREET	WATSON STREET
CHARLES STREET	HALL STREET	ORLEANS STREET	WAUGH STREET
CHASE AVENUE	HALLY ROAD	ORMSBY STREET	WAVERLY AVENUE
CHASE STREET	HAMEL PLACE	OSGOOD AVENUE	WAYSIDE LANE
CHATHAM STREET	HAMPDEN STREET	OSGOOD STREET	WEBBER STREET
CHAUNCEY STREET	HAMPSHIRE PLACE	OSTRANDER AVENUE	WEBSTER AVENUE
CHELMSFORD STREET	HAMPSHIRE STREET	OTIS STREET	WEDGE STREET
CHENEY PLACE	HAMPSTEAD STREET	OTSEGO AVENUE	WEDGEMERE DRIVE
CHERRY STREET	HAMPTON AVENUE	OTTAWA STREET	WEED STREET
CHERYL LEE LANE	HANCOCK AVENUE	OXFORD STREET	WEINBECK STREET
CHESTER STREET	HANKS STREET	PAIGE STREET	WELLESLEY AVENUE
CHESTNUT SQUARE	HANOVER STREET	PALMER STREET	WELLINGTON AVENUE
CHESTNUT STREET	HANSON TERRACE	PARK AVENUE EAST	WELLINGTON SQUARE
CHIPPEWA STREET	HARDING STREET	PARK AVENUE WEST	WELLMAN STREET
CHRISTIAN STREET	HARLAND AVENUE	PARK STREET	WELLWORTH STREET
CHRISTMAN AVENUE	HARLEM STREET	PARKER STREET	WENTWORTH AVENUE
CHURCH STREET	HARMONY WAY	PARKVIEW AVENUE	WESLEY STREET
CIDALIA DRIVE	HARRIS AVENUE	PATRICIA AVENUE	WEST ADAMS STREET
CIRCLE ROAD	HARRISON PLACE	PATRIOT WAY	WEST ALBERT STREET
CIRCUIT AVENUE	HARRISON STREET	PAWTUCKET BOULEVARD	WEST ALDEA STREET
CITY HALL AVENUE	HARTS AVENUE	PAWTUCKET DRIVE	WEST BOWERS STREET
CLARE STREET	HARVARD STREET	PAWTUCKET STREET	WEST BURNSIDE AVENUE
CLARENDON STREET	HASTINGS STREET	PAYNE STREET	WEST CLARK STREET

LOWELL STREET NAMES			
CLARK ROAD	HAVILAH STREET	PAYTON STREET	WEST ELEVENTH STREET
CLARKS COURT	HAWTHORN STREET	PEARL STREET	WEST FIFTH AVENUE
CLAUDINE DRIVE	HAYES AVENUE	PEMBERTON STREET	WEST FIFTH STREET
CLIFFORD STREET	HAZEL SQUARE	PEMBROKE STREET	WEST FOREST STREET
CLIFFSIDE ROAD	HAZEL STREET	PENN AVENUE	WEST FOURTH STREET
CLIFTON PLACE	HAZELTINE STREET	PENNIMAN CIRCLE	WEST JACKSON STREET
CLIFTON STREET	HEMLOCK LANE	PENNY STREET	WEST JENNESS STREET
CLINTON AVENUE	HENRY AVENUE	PENTUCKET AVENUE	WEST L STREET
CLITHEROE STREET	HERITAGE DRIVE	PERCY STREET	WEST LONDON STREET
CLOUGH AVENUE	HICKORY LANE	PERKINS STREET	WEST MANCHESTER ST
COBURN COURT	HIGH STREET	PERRIN STREET	WEST MEADOW ROAD
COBURN DRIVE	HIGHLAND AVENUE	PERRON WAY	WEST NINTH STREET
COBURN PLACE	HIGHLAND STREET	PERRY STREET	WEST SIXTH STREET
COBURN STREET	HILDRETH STREET	PERSHING STREET	WEST STREET
COGGER ROAD	HILLCREST DRIVE	PEVEY STREET	WEST TENTH STREET
COLBURN STREET	HILLSIDE STREET	PHEBE AVENUE	WEST THIRD STREET
COLONIAL PARK DRIVE	HOBSON STREET	PHILLIPS STREET	WESTBORO STREET
COLUMBIA ROAD	HOGUE TERRACE	PHOENIX AVENUE	WESTCHESTER STREET
COLUMBIA STREET	HOLBROOK AVENUE	PHOTINE DRIVE	WESTERN AVENUE
COLUMBUS AVENUE	HOLDEN STREET	PIHL STREET	WESTFORD STREET
COLWELL AVENUE	HOLLIS STREET	PINE HILL STREET	WESTMINSTER STREET
COMMON AVENUE	HOLT CIRCLE	PINE STREET	WESTMORELAND STREET
COMMONWEALTH AVE	HOLYROOD AVENUE	PINE TREE LANE	WESTVIEW DRIVE
CONCORD STREET	HOMESTEAD ROAD	PINEVIEW AVENUE	WESTVIEW ROAD
CONGRESS AVENUE	HORN STREET	PLAIN STREET	WESTWIND CIRCLE
CONGRESS STREET	HOSPITAL DRIVE	PLEASANT STREET	WESTWIND ROAD
CONOYLE STREET	HOUGHTON STREET	PLINY STREET	WETHERBEE AVENUE
CONSTANCE DRIVE	HOVEY AVENUE	PLUMMER AVENUE	WHIDDEN STREET
COOKS WAY	HOVEY PLACE	PLYMOUTH STREET	WHIPPLE STREET
CORAL STREET	HOVEY STREET	POLLARD AVENUE	WHITE STREET
CORBETT STREET	HOWARD STREET	POLLARD STREET	WHITEHEAD AVENUE
COREY STREET	HOWE STREET	POND STREET	WHITING STREET
CORINTHIAN DRIVE	HOYT AVENUE	POPLAR STREET	WHITMAN STREET
CORK STREET	HUDSON STREET	PORTER STREET	WHITNEY AVENUE
CORNELL STREET	HUMPHREY STREET	PORTER TERRACE	WIGGIN COURT
CORNER STREET	HUNNEWELL CIRCLE	POST OFFICE SQUARE	WIGGIN STREET
CORRIGAN AVENUE	HUNTINGTON STREET	POTTER STREET	WIGHTMAN STREET
CORSON STREET	HUNTOON AVENUE	POWELL STREET	WILBUR STREET
COSGROVE STREET	HURD STREET	PRATT AVENUE	WILDER AVENUE
COTTAGE PLACE	HUTCHINSON STREET	PRESCOTT STREET	WILDER ROAD

LOWELL STREET NAMES			
COTTAGE STREET	INA STREET	PRESTON STREET	WILDER STREET
COURT AVENUE	INDEPENDENCE DRIVE	PRINCE AVENUE	WILLARD STREET
COURT STREET	INDUSTRIAL AVENUE	PRINCETON BOULEVARD	WILLIAMS STREET
COURTLAND STREET	INDUSTRIAL AVENUE EAST	PROSPECT STREET	WILLIE STREET
COURTNEY LANE	INDUSTRIAL PARK ROAD	PUFFER AVENUE	WILLOW STREET
CRANE AVENUE	INLAND STREET	PUFFER STREET	WILTSHIRE CIRCLE
CRANE STREET	IONIAN CIRCLE	PUTNAM AVENUE	WINDING LANE
CRAWFORD STREET	IOWA STREET	QUEBEC STREET	WINDSOR STREET
CRESCENT STREET	IRVING STREET	QUEEN STREET	WINDWARD ROAD
CRESTA DRIVE	ISLAND STREET	QUIMBY AVENUE	WINONA STREET
CROSBY STREET	JACKSON STREET	RACE STREET	WINSLOW AVENUE
CROSS STREET	JACQUES STREET	RALPH STREET	WINSOR PARK ROAD
CROSS STREET AVENUE	JAMES COURT	RANDOLPH STREET	WINTER STREET
CROWLEY STREET	JAMES STREET	RAVEN ROAD	WINTHROP AVENUE
CRYSTAL STREET	JEAN AVENUE	RAY COURT	WOBURN STREET
CUMBERLAND ROAD	JEANNE DARC STREET	RAYNOR STREET	WOLLASTON STREET
CUNNINGHAM STREET	JEFFERSON STREET	REA STREET	WOOD COURT
CURTIS DRIVE	JENNESS STREET	READ STREET	WOOD STREET
CUSHING STREET	JENNIFER ROAD	READY AVENUE	WOODBINE PLACE
D STREET	JENNINGS PLACE	REDWOOD LANE	WOODCOCK STREET
DABBY WAY	JEWETT AVENUE	REISS AVENUE	WOODLAND DRIVE
DAISY DRIVE	JEWETT STREET	REMINGTON STREET	WOODVALE LANE
DALLAS ROAD	JOFFRE STREET	RESERVOIR STREET	WOODWARD AVENUE
DALTON COURT	JOHN STREET	REVERE STREET	WORTHEN STREET
DALTON PLACE	JOHNSON STREET	REXFORD STREET	WRIGHT STREET
DALTON STREET	JOINERS COURT	RHODORA STREET	WYMAN STREET
DAMON STREET	JORDAN STREET	RICHARDS STREET	YMCA DRIVE
DANA STREET	JOYCE AVENUE	RICHARDSON AVENUE	
DANCAUSE ROAD	JULY STREET	RICHARDSON STREET	

APPENDIX 2:
HERBICIDE FACT SHEETS
LOCATED AT:

HTTP://WWW.MASS.GOV/EEA/AGENCIES/AGR/PESTICIDES/RIGHTS-OF-WAY-VEGETATION-MANAGEMENT.HTML

Appendix 3:
Herbicide Labels

Arsenal Powerline:
http://www.cdms.net/LDat/ld86K002.pdf

Escort XP:
http://www.cdms.net/LDat/ld5QT029.pdf
http://www.cdms.net/ldat/ldCFM000.pdf

Garlon 4 Ultra:
http://www.cdms.net/LDat/ld7IN006.pdf

Krenite S:
http://www.cdms.net/LDat/ldB94000.pdf

Oust Extra:
http://www.cdms.net/LDat/ld6BP011.pdf
http://www.cdms.net/ldat/ldCJ3000.pdf

Patriot
http://www.cdms.net/ldat/ld6KH004.pdf

Polaris
http://www.cdms.net/LDat/ld8KR002.pdf

Rodeo:
http://www.cdms.net/LDat/ld4TN009.pdf

APPENDIX 4:
HERBICIDE SPILL CHECK LIST

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REPORTABLE SPILLS (Spills of reportable quantity of material): FOLLOW STEPS 1-10
NON-REPORTABLE SPILLS: FOLLOW STEPS 1, 2, 3, 4, 7, 8, 9, 10 & 11 as appropriate and contact the Lowell DPW representative.

Order	ACTION		Done (√)
1	Use any and all PPE as directed by product label or SDS.		
2	Cordon-off spill area to unauthorized people and traffic to reduce the spread and exposure of the spill		
3	Identify source of spill and apply corrective action, if possible stop or limit any additional amounts of spilled product.		
4	Contain spill and confine the spread by damming or diking with soil, clay or other absorbent materials.		
5	Report spills of "reportable quantity" to the Mass. DEP and DAR:		
	Massachusetts DAR, Pesticide Bureau	(617) 626-1700	
	Massachusetts Department of Environmental Protection, Emergency Response Section	Main Office: (888) 304-1133 (after hours number)	
		Northeast Region: (978) 694-3200	
6	If the spill cannot be contained or cleaned-up properly, or if there is a threat of contamination to any bodies of water, immediately contact any of the following applicable emergency response personnel:		
	local fire, police, rescue	911	
	Lowell DPW Representative: **Ralph G. Snow**	(978) 674-4111	
	Product manufacturer(s) 1	1	
	2	2	
	3	3	
	Chemtrec	(800) 424-9300	
	additional emergency personnel:		
7	Remain at the scene to provide information and assistance to responding emergency clean-up crews		
8	Refer to the various sources of information relative to handling and cleanup of spilled product		
9	If possible, complete the process of "soaking up" with absorbent materials		
10	Sweep or shovel contaminated products and soil into leak proof containers for proper disposal at approved location		
11	Spread activated charcoal over spill area to inactivate any residual herbicide		