

**SPRINGFIELD COMMUNITY PRESERVATION
FULL APPLICATION COVER SHEET**

I. PROJECT INFORMATION

CPA program area - check all that apply:

community housing historic preservation open space recreation

Project/Program Title:

Brief Project/Program Summary:

estimated start date: _____ estimated completion date: _____

II. APPLICANT INFORMATION

Type of Applicant - check one:

City of Springfield Non-Profit Organization For-Profit Business Individual

Name of Organization:

Name of Contact Person:

Mailing Address:

Mailing City/State/Zip:

Phone:

Fax:

Email:

Website:

III. BUDGET SUMMARY

Estimated Project Budget:


CPA Funding Request:

Will you be seeking multi-year funding Yes No

CPA Request as Percentage of Total Project/Program Budget:

List Other Secured Funding Sources:

List Other Prospective Funding Sources:

Applicant Signature: 

Date Submitted: March 30, 2020

ReGreen Springfield Invasive Plant Program (ReGreen Springfield IPP) – Phase II Funding Request

Submitted by ReGreen Springfield

David V. Bloniarz, President

One Federal Street

Springfield, MA 01005

www.regreenspringfield.org

I. General Information

This project is in the Open Space & Recreation category of the CPA program area, and includes open spaces, trails, conservation lands, other parks, and additional target areas that have been identified by the Springfield Community Preservation Act Committee. This initiative involves the treatment of invasive plants on public property, in parks and on public right of ways. This effort will continue the work that has begun under the 2019 CPA grant award to ReGreen Springfield, which has resulted in the City's first effort to strategically control invasive plants in Springfield. The initial work that has been completed includes development of a 5-Year Right of Way Plan for invasive control, training and licensing of (4) pesticide applicators, identification of (10) additional invasive plant populations in Springfield larger than a quarter of an acre in size, and control treatment of over (5) acres of public open space and trails.

Additionally, the development of the state's first scientific study of the efficacy of treatment methods has been launched, in partnership with the U.S. Forest Service, the Massachusetts Department of Agricultural Resources, the University of Massachusetts and the City of Springfield. This study, will provide results at about the same time as this CPA grant funding commences, which will provide recommendations on how to most effectively utilize CPA funds for the control of Japanese Knotweed, which is the targeted plant for control via the initial invasive control efforts in Springfield.

The control efforts outlined in this proposal will again focus on areas recommended by the CPA Committee, in consultation with the Springfield Parks Department and the Conservation Commission. We expect continued efforts to control invasive plants in CPA-funded Conservation, areas along the proposed McKnight Trail, the Connecticut River Walk-Bikeway, the McKnight Dingle, as well as in Forest Park, Van Horn Park, and Blunt Park. Additional priority areas may be identified by the CPA Committee, based on 2020 CPA grant awards, that might include properties containing invasive plants. Our goal is to provide the Committee with a timely, responsive and effective mechanism to respond to emerging needs and to best utilize CPA grant funds.

II. Narrative

A. Project Summary

This project directly addresses the CPA Open Space and Recreation Priority of controlling invasive plant species in public parks/open space/trails. The long-term goal of the ReGreen Invasive Plant Program is to control invasive species growing in all of Springfield's parks, open spaces, trails and other public lands, focusing during the first phase (3-years) on high priority areas such as the Connecticut River Walk-Bikeway, areas along the proposed McKnight Trail, in Glen Brook, Forest Park, other parks, and priority sites that have higher potential to spread. The proposed budget of \$40,000 in this CPA proposal will continue treatments begun via the 2018 CPA grant award to ReGreen Springfield, as it carries out its invasive control program.

We also propose to deliver a series of public informational/educational programs aimed at encouraging Springfield residents to control outbreaks of invasive plants on their own properties, using non-chemical treatments and methods. Additionally, this outreach will continue our effort to enlist community residents in this program. These sessions will be delivered by project partners including the U.S. Forest Service, the City of Springfield Forestry Division, and the University of Massachusetts Department of Natural Resources Conservation.

Additionally, this funding will be used to implement key recommendations of the invasive study, noted earlier in this proposal. We expect that this will enhance the effectiveness and value of the CPA Committee investment in this project and enable more acres of land to be treated. The findings of this study will be valuable to this program, and will be shared widely to other communities and public agencies, via the project partners and will include acknowledgement of the CPA Committee and the City of Springfield. Since there are relatively few scientific studies, in the U.S., that address Japanese knotweed control, this will be a great opportunity for Springfield to serve as a national leader in implementing science-based invasive plant control strategies.

B. Proposal Description

1. Benefits to Springfield: Invasive plants, primarily Japanese knotweed, threaten many of Springfield's parks, open spaces, and trails. Invasive plants have already taken over large stretches along the Connecticut River Walkway-Bikeway, the proposed McKnight trail, McKnight Glen with many smaller numerous infestations in other parks and open spaces. This program will continue to identify invasive plant sites, including areas along rights-of-way, along roadways, in parks and conservation areas, collaborate with the CPA Committee, the Springfield Parks Department, and the Springfield Conservation Commission, and utilize a strategic plan to carry out effective measures (some of which require herbicides) to treat these invasives in order to preserve and enhance these open spaces and recreational land.

In addition to controlling invasive plant outbreaks in Springfield, this project will provide residents with information and educational resources, alerting them to the importance of controlling invasive plants on their property. Cultural, mechanical and non-chemical control techniques will be highlighted during a series of informational presentations in each city neighborhood. ReGreen Springfield will work through the neighborhood associations and councils to deliver these sessions, and we will also develop a publicly accessible webpage that provides updates information and volunteer opportunities for residents to assist in control efforts.

Another benefit to this project is the ability to work with the CPA Committee in helping to control invasive plants on sites, on building grounds or at other locations that are receiving funds awarded by the Committee. This will add value to the CPA investment and preservation efforts at these important places.

2. CPA Criteria: This proposal meets the specific CPA Open Space and Recreation Priority of controlling invasive plant species. Control of invasive plants meets several of the other priorities including improving access to the Connecticut River Bikeway/Walkway, setting the stage for the McKnight Bikeway/Walkway, improving access to the Connecticut River for water-base recreation, improving degraded ponds and surroundings, and renovating walking trails in conservation areas.

Additionally, this proposal meets CPA criteria for project implementation including the following:

- Consistent with priorities identified in the Community Preservation Plan – This project is in sync with the work of the CPA Plan and Committee, and ReGreen Springfield has established a working partnership with the Committee as we have carried out the initial work funding via the 2018 CPA grant award; this project is a prime opportunity to maximize the impact of CPA dollars by tackling a persistent city-wide conservation problem coupled with other CPA-related concerns. Additionally, funding this program will result in the training of local community residents to perform portions of the work, in line with the CPC's 2020 Community Preservation Plan goals;
- Preserve and enhance the essential character of Springfield – The project tasks outlined in this proposal are focused on preserving and enhancing the natural components of Springfield's character;
- Protect resources that would be otherwise threatened – The areas outlined for action in this proposal are already threatened and need immediate action if they are going to be controlled in an economically and

environmentally safe manner. Controlling invasive plants will help prevent their further spread into Springfield's natural resource areas;

- Serve more than one CPA purpose – The work included in this proposal is linked closely with other projects funded via the CPA Committee, thereby enhancing the value and investment in projects undertaken via the grant program. This project actually provides additional preservation efforts on other CPA projects that otherwise might have invasive plants growing on their sites, which are likely to expand in size and impact in short order;
- Demonstrate practicality and feasibility so the project can be implemented within budget and on schedule – The 2018 CPA Committee funding award to ReGreen Springfield, and the work currently underway, has been undertaken in a timely, professional, science-based manner, and has implemented these efforts effectively, despite the delay in the award of a contract and scope of services. ReGreen has provided reports to the CPA Committee, and has made informational presentations to the Committee, outlining progress on the invasive control program and work completed to date. We are very excited to keep the Committee informed of the work and we have also provided updates to the Springfield Parks Department, which demonstrate our control efforts;
- Produce an advantageous cost/benefit value – Since ReGreen Springfield is a 501(c)3 non-profit organization, we are able to carry out the work outlined in this project in a more economical manner than contracted commercial firms or by City staff. Additionally, the utilization of community volunteers is a key component of completing this work in a very economical manner;
- Leverage additional public and/or private funds or voluntary contributions of goods and services – This project will include contributions of staff and/or materials by the Springfield Parks Department, the Hampden County Sheriff's Department and community volunteers;
- Receive endorsement from municipal boards/departments and from neighborhood councils/associations – The initial work proposed, and currently underway via the 2018 CPA grant application and contract, included the full endorsement of the Springfield Parks Department, Conservation Commission, and Mayor's Office, as well as the McKnight Neighborhood Council, the Armory Quadrangle Civic Association, the East Springfield Citizens Council, the Maple High-Six Corners Neighborhood Council, and the East Forest Park Civic Association.
- Utilize Springfield based resources -- Tools, equipment, herbicides, signage, printing and other items needed by this project will be purchased in Springfield as much as possible. We have utilized primarily Springfield firms in carrying out the 2018 CPA grant and expect to continue this process in this funding cycle. Firms used to date include: American Safety Supply, Grainger Industrial Supply, Rocky's Hardware, and Sixteen Acres Garden Center.

3. Need: Invasive plants, primarily Japanese knotweed, threaten many of Springfield's parks, open spaces, and trails. Knotweed clogs up drainage, obstructs views, blocks paths and trails, overtakes native plants, and can damage the structural integrity of structures and pathway materials, including asphalt concrete and brick. Knotweed and phragmites can overtake riverways, wetlands and forested areas. This project includes the use of some selected general-use registered herbicides, which are needed for effective control of these invasive plants, by licensed and certified applicators. If we don't do anything now, it would be much more difficult and costly to treat in the future. Additionally, cultural and mechanical measures will be used to control the invasive vegetation, as appropriate, especially in environmentally sensitive areas. The ongoing study of control methods, that was noted earlier, will help to direct the control actions undertaken in this project.

4. The Expected Outcome: The overall goal of this project is to prevent further degradation of, and to significantly improve Springfield's parks/open spaces/trails. Treating knotweed and other invasives will encourage the growth of native plants. Projects such as a McKnight trail require management of the extensive Japanese knotweed and phragmites prior to being able to build a trail. Implementation of first phase of the Five-Year Plan for treatment in rights-of-way, treatment of CPA Committee targeted areas and other critical locations outlined in this proposal are expected to be treated during the contract phase of this funding. This funding will support ReGreen's effort

to recruit and develop employees/interns who are licensed/certified pesticide applicators who could do the treatments at a much lower cost than outside contractors. We will focus our treatment efforts in high priority areas first. It is expected that 90% of treated knotweed be killed via the applications carried out through this funding, with minimal plant treatment in the following year

We expect to treat (40) acres of knotweed and (2) acres of Phragmites over the contract period.

C. Feasibility & Sustainability

1. Other Funding: ReGreen Springfield has other funds supporting some of its core activities, and has received a \$10,000 donation for its invasive plant program, which it has not yet exhausted. The remaining funds from this donation are earmarked for the work outlined in this proposal. The Springfield Parks Department and the Conservation Commission are partners in these efforts to identify and manage invasive plants. Private donations will be encouraged, and we identify and apply for grants during the period of this grant proposal submission and the contract execution, as well as during the grant period. Using private funds, ReGreen help manage invasive plants on private property, including those adjacent to public parks and open spaces, and other areas noted in this proposal.
2. Once the proposal is complete how will it be sustained/maintained: Unfortunately, invasive plants are already so extensive and established in Springfield, we do not expect the effort will ever be totally completed throughout the city. But we can make a big difference as we carry out the programming outlined in the 5-Year Right of Way Plan, the yearly operational plans that will be implemented and by continuing to carry out the goals of the ReGreen Springfield Invasive Plant Program. We know that the management of invasive plants in Springfield will require a program with on-going funding for many years in order to be effective. We hope for continued support from the CPA Committee, and will encourage private donations, City support, and grants to support this program in the long-term.
3. Pro forma for when proposal is complete: Each location that is treated will be evaluated yearly in the spring or early summer, and targeted for additional treatment late in the summer if there are any invasive plants. Once a site has no invasive plants for three years, that site can be considered free of invasive plants. ReGreen Springfield is committed to continued monitoring beyond three years. ReGreen Springfield will update its list of sites with invasive plants yearly to include when the sites have been treated, dates of treatment and their control status.

D. Applicant Experience

1. Similar projects/programs: As the CPA Committee is aware, ReGreen Springfield is currently in the third year of its Invasive Plant Program, and has a record of safe, professional and effective implementation of control methods, including mechanical, cultural and chemical techniques. This effort has been undertaken on 10 acres of public land thus far, and will continue through 2020. Additionally, the development and implementation of a science-based study, that will gauge the effectiveness of various treatment techniques has begun, demonstrating our commitment to using science to control invasives in the most environmental and economic manner possible.

Additionally, ReGreen Springfield has experience in other aspects of environmental stewardship in Springfield. We have extensive experience managing nearly \$2 million in efforts to plant trees in Springfield following the June, 2011 tornado and has successfully recruited community residents, student interns for many projects, including the first phase of the Invasive Plant Program and plans to recruit additional interns who will become licensed/certified applicators at a much lower cost than that of outside contractors. ReGreen Springfield also has experience using outside contractors, as we have recently completed a \$200,000 contract with Davey Resource Group, one of the country's leading vegetation managers and a \$270,00 grant from the City of Springfield Office of Disaster Services. ReGreen's collaborations with businesses, community organizations, educational partners and government agencies will continue, and be enhanced, through the ReGreen Invasive Plant Program.

2. Professional experience of applicant/project team:

David Bloniarz, Ph.D., the President of ReGreen Springfield, has been leading ReGreen in its efforts to promote reforestation, improve growing conditions for trees and engage new allies in tree care and monitoring, education and citizen science. Dr. Bloniarz is a Research Scientist with the USDA Forest Service, who's work involves carrying out programs in urban forests across the Northeast, including many cities including New York City, Boston, Baltimore, Philadelphia, Burlington, VT and many others. David is the Director of the US Forest Service Urban Natural Resources Institute, and he is a faculty member in the Department of Environmental Conservation at the University of Massachusetts/Amherst and has lectured at the Harvard Graduate School of Design. He is a Massachusetts Licensed Pesticide Applicator.

Dr. Douglas Johnson, a Springfield resident, who is assisting ReGreen Springfield with this proposal and project implementation, has 10 years of experience developing and helping lead a successful invasive plant program (primarily treating Japanese knotweed, also wild parsnip and phragmites) in the Adirondacks of New York. His expertise brings practical approaches to the planning and delivery of this program. Dr. Douglas Johnson is a certified pesticide applicator in New York, and is a Massachusetts Licensed and Right-of-Way control applicator. He has led successful efforts to control (including eradication at many sites) Japanese knotweed throughout the Adirondacks using stem injection and foliar spray of plants too small to inject with glyphosate. For treating phragmites, a cut and drip method can target the plant with little effect on adjacent native plants. With over 15 volunteers identifying sites and obtaining property owner permission, support from towns and counties, and support from donors and grants to pay certified applicators, the program treats about 50,000 knotweed canes a year at hundreds of sites across the Adirondacks. It is described on www.noknotweed.org, which includes links to videos of knotweed and phragmites control.

2. ReGreen Springfield will hire interns to help with identification of sites with invasive plants. ReGreen Springfield will contract with licensed and certified applicators to do the pesticide applications. ReGreen may hire people who are or will become licensed or certified applicators. A certified right-of-way pesticide applicator is needed on-site for treatments in ROW. With additional program development, ReGreen's expects to develop a program for community 'citizen scientists' who will be prepared for licensing as certified pesticide applicators, and will become part of the program's field team.

III. Timeline

Since the exact date of award of funds via the 2020 CPA Program is dependent on a variety of factors, the exact start of the programming outlined in this proposal is difficult to estimate. It is expected that the current 2018 CPA grant funding and ReGreen's own resources, programming for the Invasive Plant Program will continue through 2020, and will then be followed via the 2020 CPA funding, if the Committee selects this project, and the City Council approves the decision.

Due to the fact that much of the work that will be undertaken in this project is weather dependent, and knotweed is controlled most effectively at specific seasonal times, we propose that a final Project Timeline submittal be deferred until the effective date of a contract can be determined. This will enable us to provide the most realistic and accurate timeframe for project implementation. Ongoing community education and outreach, neighborhood informational sessions, volunteer recruitment and other activities, as well as the work outlined in the 2018 CPA grant will continue through 2020 and early 2021, which will coincide with the start of the 2020 CPA funding.

Figure 1, shown below, outlines the yearly growth pattern of Japanese knotweed in the Springfield area. We will use this in our planning of the final Project Timetable, once we know the approximate start date.

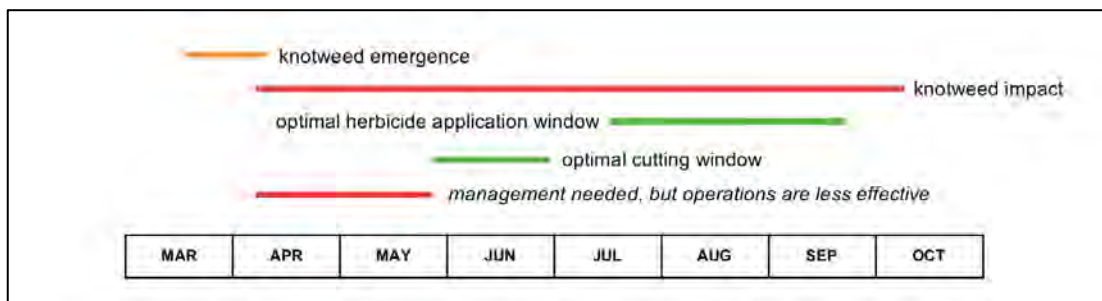


Fig. 1 -- Japanese Seasonal Growth in Springfield Area (01103)

IV. Budget

ReGreen Springfield has already demonstrated (in our 2018 CPA Grant Proposal) that the most effective use of CPA funds to address and control invasive plants in Springfield is for ReGreen Springfield to carry out invasive control measures in the city. The following table outlines the anticipated costs associated with this 2020 CPA Grant proposal.

Itemized Costs

ITEM	QTY	PRICE	TOTAL
Backpack Sprayer	5	\$150	\$750
Herbicide Injection Devices	5	\$350	\$1,750
Rodeo herbicide	30 gal	\$12	\$360
Personal Protective Equipment	15 sets	\$75	\$1,125
Informational Signage (small)	50	\$25	\$1,250
Informational Signage (large)	5	\$250	\$1,250
Printing	LS	\$1,400	\$1,400
Travel Reimbursement for Volunteers	LS	\$750	\$750
Paid Applicator Staff	800hrs	\$45	\$32,000
In-Kind Staff & Overhead Donation	90 hrs	\$45	(\$4,050)
In-Kind Field Staff	95 hrs	\$45	(\$4,275)
Volunteer Field Work	120 hrs	\$25	(\$3,000)
		Total Funding Request	\$40,635

The estimated cost for ReGreen Springfield licensed pesticide applicators is \$45/hr. We expect to complete 800 hours of work in the field during the contract period. A donated In-Kind contribution of \$11,325 by ReGreen Springfield staff and community volunteers is also noted in the itemized budget.

V. Attachments

A. Commitment letter – From ReGreen Springfield

B. Letters of Support (City)

Springfield Park Commission

Springfield Conservation Commission

C. Letters of Support (Community)

McKnight, AQCA, East Springfield, Maple High-Six Corners, and East Forest Park

D. Maps

1. Citywide Knotweed Survey and Activity Map

E. Plans - N/A

F. Photographs – N/A

G. Pro Forma

ReGreen will maintain and provide a list of sites identified, sites treated and dates treated, as well as all data and filing requirements mandated by the Massachusetts Pesticide Control Board. ReGreen Springfield will update its list of sites with invasive plants yearly to include when the sites have been treated, dates of treatment and whether they are free of invasive plants. All of the information related to reporting, mapping and application records will be available at the Regreen Springfield webpage, www.regreenspringfield.org/ipp

Budget

Project Budget

ReGreen Springfield has already demonstrated (in our 2018 CPA Grant Proposal) that the most effective use of CPA funds to address and control invasive plants in Springfield is for ReGreen Springfield to carry out invasive control measures in the city. The following table outlines the anticipated costs associated with this 2020 CPA Grant proposal.

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Informational Signage (small)	50	\$25	\$1,250
Informational Signage (large)	5	\$250	\$1,250
Printing	LS	\$1,400	\$1,400
Travel Reimbursement for Volunteers	LS	\$750	\$750
Paid Applicator Staff	800hrs	\$45	\$32,000
In-Kind Staff & Overhead Donation	90 hrs	\$45	(\$4,050)
In-Kind Field Staff	95 hrs	\$45	(\$4,275)
Volunteer Field Work	120 hrs	\$25	(\$3,000)
		Total Funding Request	\$40,635

The estimated cost for ReGreen Springfield licensed pesticide applicators is \$45/hr. We expect to complete 8.0 hours of work in the field during the contract period. A donated In-Kind contribution of \$11,325 by ReGreen Springfield staff and community volunteers is also noted in the itemized budget.

Map

The following page shows a map of Japanese knotweed sites in Springfield, proposed areas for invasive plant control in 2020, as well as control locations treated in 2019.

**COMMUNITY PRESERVATION ACT
2020 GRANT FUNDING PROPOSAL
ReGreen Invasive Plant Program (ReGreen Springfield IPP)**

**PUBLIC PARKS, PLAYGROUNDS
AND CONSERVATION AREAS**

- Municipal Parks
- Federal Parks
- State Recreational Facilities
- Conservation Land
- School Playgrounds

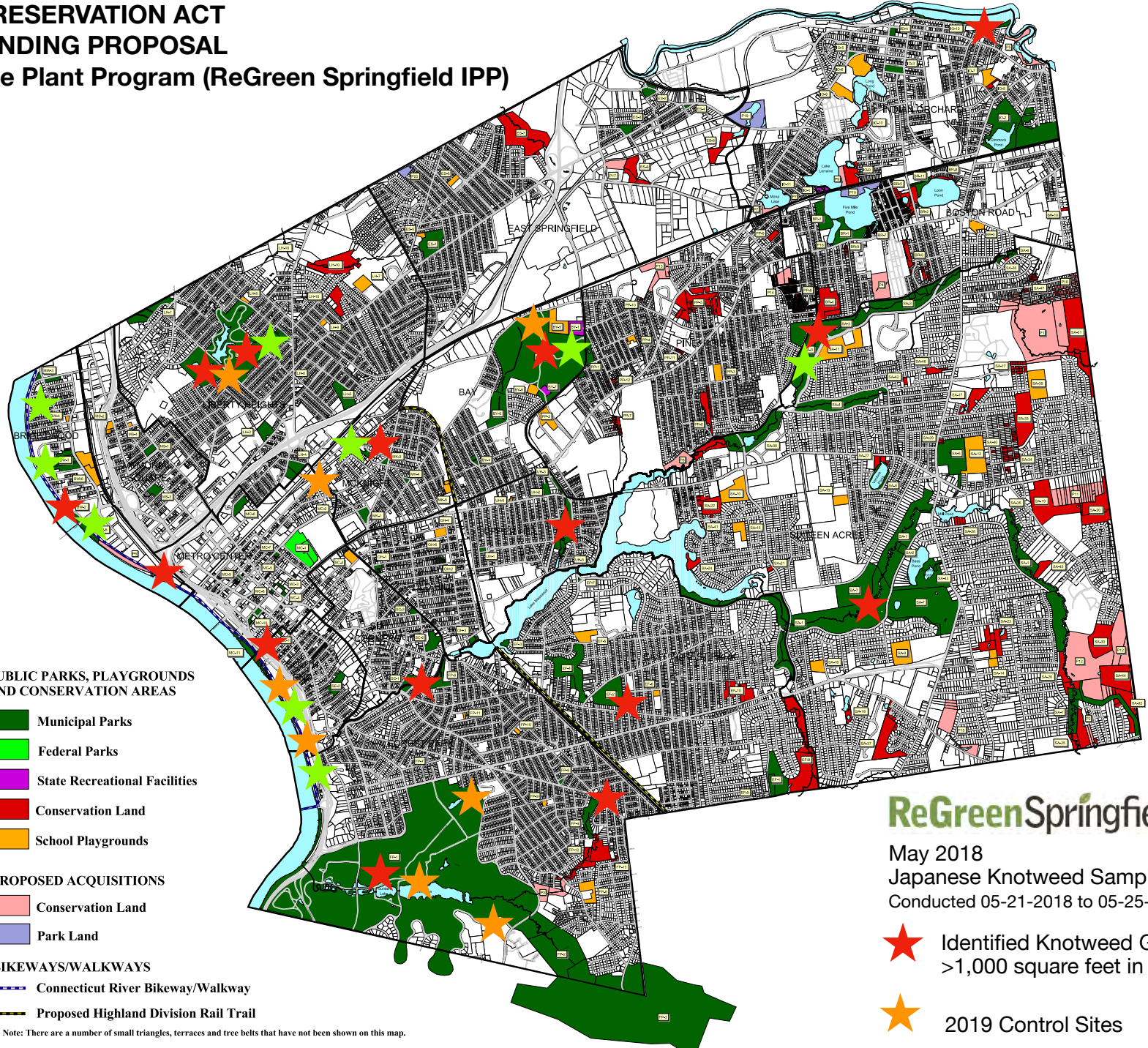
PROPOSED ACQUISITIONS

- Conservation Land
- Park Land

BIKEWAYS/WALKWAYS

- Connecticut River Bikeway/Walkway
- Proposed Highland Division Rail Trail

* Note: There are a number of small triangles, terraces and tree belts that have not been shown on this map.



ReGreenSpringfield

May 2018
Japanese Knotweed Sample Survey
Conducted 05-21-2018 to 05-25-2018

- Identified Knotweed Growth >1,000 square feet in area
- 2019 Control Sites
- 2020 Proposed Control Sites

Photos

CT River Walkway-Bikeway
March 30, 2020



Van Horn Park
March 30, 2020



Proposed McKnight Trail
March 30, 2020



Proposed McKnight Trail
Patrick Johnson / The Republican



Forest Park
Japanese knotweed controlled
Fall 2019



Forest Park
Japanese knotweed controlled
Fall 2019



Letters of Support

The following pages contain letters of support for the ReGreen Springfield Invasive Plant Program. All letters were written in support for this program, which includes components outlined in this 2020 CPA Grant Proposal.



City of Springfield
Parks, Buildings, and Recreation Management

May 25, 2018

To: Community Preservation Committee

From: Springfield Park Commission

Re: Invasive Plant Control Program

The Springfield Park Commission enthusiastically supports ReGreen Springfield's application for an invasive plant control program.

The invasive plant control program will control invasive plant species in public parks, open spaces and trails. The program will further enhance the quality of life for Springfield's citizens.

We are available to answer any questions and look forward to working with the CPA committee to implement this project.

Sincerely,

Patrick J. Sullivan
Executive Director of PBRM

cc: Brian Santaniello, Springfield Park Commission Chairman



THE CITY OF
SPRINGFIELD, MASSACHUSETTS

May 22, 2018

Community Preservation Committee
City Hall, 36 Court Street
Springfield, MA, 01103

To Whom It May Concern,

The Springfield Conservation Commission would like to lend its support to the proposal being submitted by ReGreen Springfield. We are excited for the potential the Community Preservation Act has created with regards to promoting and engaging open space in the City. As you may be aware, non-native plant species pose a great threat the biodiversity of our local green spaces. When introduced they have the potential to outcompete and destroy native plants that provide habitat value to our local fauna. Japanese knotweed is particularly difficult to manage once it has a hold in an area. This project seeks to implement best management practices in controlling and eliminating this species of invasive plant. All green space in Springfield is enhanced by reversing the spread knotweed. Should you have any questions, feel free to contact our office at (413) 787-6234.

Regards,

A handwritten signature in blue ink, which appears to read "Chris Collins". The signature is fluid and cursive.

Christopher Collins, Chairman
Springfield, MA Conservation Commission



Armory-Quadrangle Civic Association
140 Chestnut Street #C • Springfield, MA 01103

May 30, 2018

City of Springfield
Community Preservation Commission
% Finance Dept.
36 Court Street
Springfield, MA 01103

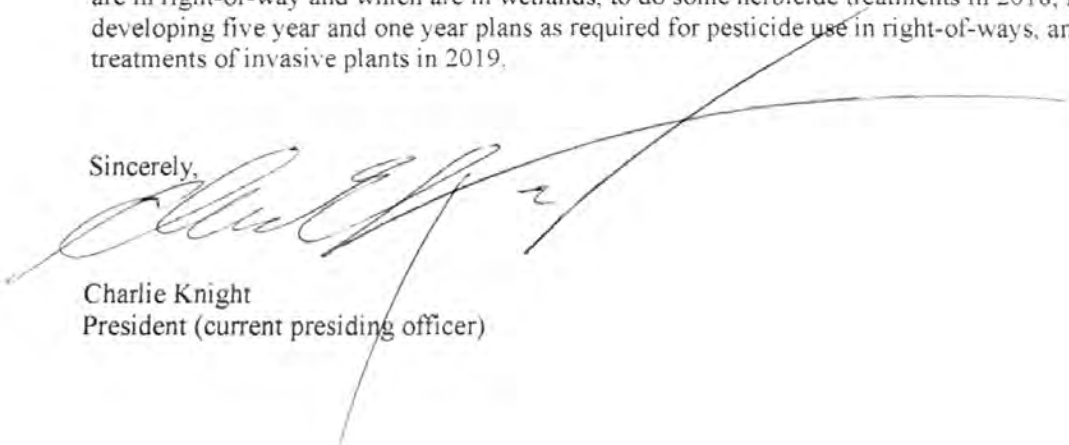
Re: Application for Community Preservation Act Grant
Control of Invasive Plants.

Dear Community Preservation Committee:

I am writing to you to express the support of the Armoury-Quadrangle Civic Association for **Invasive Plant Control Program for Springfield Open Space** proposal as outlined below.

This project directly addresses the CPA Open Space and Recreation Priority of controlling invasive plant species in public parks/open space/trails. The long term goal is to control invasive species across all of Springfield's parks and open spaces, focusing the first year on high priority areas such as Forest Park, other parks, and sites that have higher potential to spread. The budget of \$40,000 the first year will allow ReGreen to identify sites across Springfield's parks/open spaces/trails including which sites are in right-of-way and which are in wetlands, to do some herbicide treatments in 2018, fund developing five year and one year plans as required for pesticide use in right-of-ways, and to do much treatments of invasive plants in 2019.

Sincerely,



Charlie Knight
President (current presiding officer)

<http://aqca.org>

(413) 747-1830

aqca@aqca.org

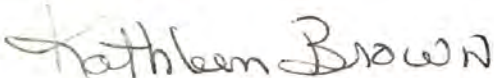
**East Springfield Neighborhood Council
c/o 136 Edendale Street
Springfield MA 01104**

May 29, 2018

Dear Community Preservation Act Committee:

The East Springfield Neighborhood Council recognizes the need to control invasive species across all of Springfield's parks and open spaces. It is a huge ongoing, complicated and important task. We are pleased that Re-Green Springfield is addressing this problem and we are in support of allocations of Community Preservation Act funds to control invasive plant species. We hope you will look favorably on this proposal.

Sincerely,

A handwritten signature in cursive script that reads "Kathleen Brown".

**Kathleen Brown
President, East Springfield Neighborhood Council**

East Forest Park Civic Association

May 31th, 2018

Dear Grant Review Committee,

The East Forest Park Civic Association supports Regreen Springfield's application for funding via the Community Preservation Act (CPA). They are planning to develop a program for identification of invasive plants growing in public parks, conservation lands, and other open spaces. We hope this helps them move the application forward and are successful in acquiring funding.

Invasive Plant Control Program for Springfield Open Space

This project directly addresses the CPA Open Space and Recreation Priority of controlling invasive plant species in public parks/open space/trails. The long term goal is to control invasive species across all of Springfield's parks and open spaces, focusing the first year on high priority areas such as Forest Park, other parks, and sites that have higher potential to spread. The budget of \$40,000 the first year will allow ReGreen to identify sites across Springfield's parks/open spaces/trails including which sites are in right-of-way and which are in wetlands, to do some herbicide treatments in 2018, fund developing five year and one year plans as required for pesticide use in right-of-ways, and to do much treatments of invasive plants in 2019.

We hope that you will look favorably on the Invasive Plant control Program for the Springfield Open Space application. Again, we are in support of this program and look forward to the implementation in our city.

Sincerely,

Elizabeth Hogan

Elizabeth Hogan,

EFPCA President

cc:David V. Bloniarz, Ph.D.
Project Coordinator
Urban Natural Resources Institute
USDA Forest Service
Holdsworth Natural Resources Center
Univ. of Massachusetts
Amherst, MA 01003
Phone: 413/545-3755
Cell: 413/537-3748
e-mail: dbloniarz@fs.fed.us
web: <http://www.unri.org>



Maple High Six Corners Neighborhood Council, Inc.

74 Walnut Street, Suite #B109

Springfield MA 01105

736-4493, maplehighsixcorners@yahoo.com

President: Melvin Edwards, 348-8036, melvinspeaks@msn.com

Vice President: Raymon Ray, 736-9131, rayland500@yahoo.com

Secretary: Linda Bartlett, 519-3936, vze4f2rh@comcast.net

May 29, 2018

Community Preservation Committee
Springfield City Hall
36 Court Street
Springfield, MA 01103

Re: Application for Community Preservation Act Grant
Regreen Springfield
Invasive Plant Control Program for Open Spaces

Dear Community Preservation Committee:

I am writing to convey the support of the Maple High Six Corners Neighborhood Council for Regreen Springfield's application for Community Preservation Act funds to implement an Invasive Plant Control Program for Open Spaces in the city of Springfield. Our open spaces are increasingly being threatened with invasive plant species that are hard to control and eradicate once they get established. They crowd out and can destroy beneficial plants and landscaping and severely impact the beauty of our parks and open spaces.

Regreen Springfield's program will help to preserve the beauty of our parks and open spaces by controlling these invasive species of plants. Regreen Springfield has an established record of assisting in the beautification of our neighborhood by planting trees here and educating residents with workshops and presentations.

The Maple High Six Corners Neighborhood Council sincerely appreciates work of Regreen Springfield in our neighborhood and across our city and hope that this application will be approved. Many thanks for your consideration of this matter.

Sincerely,

Linda Bartlett

Linda Bartlett, Secretary
Maple High Six Corners Neighborhood Council

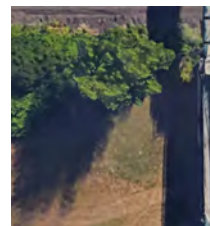
Miscellaneous

The following pages contain additional support materials for this grant proposal, including the science-based invasive control study being undertaken along the Connecticut River Walkway-Bikeway.

Connecticut River Bike-Walkway Japanese Knotweed Control Study - 2020



Test Plot #001



Test Plot #002



Test Plot #003



Test Plot #004



Test Plot #005



Test Plot #006

STUDY AREA TREATMENTS

These plots will be used to study the effectiveness of several control methods for the Japanese Knotweed growing along the Connecticut River Walk-Bikeway.

The following testing protocols will be used during the Spring 2020:

- Spray Treatment (bi-weekly)
- Stem Injection (bi-weekly)
- Mowing (bi-weekly)
- Plastic Tarps (when plant is at 3" height)
- Cardboard Cover



NORTH

ReGreenSpringfield



Springfield Community Preservation Committee

cpc@springfieldcityhall.com
36 Court Street, Room 412 - Springfield, MA 01103

Invasive Plant Control Program

Project Update
December 1, 2019



Control Applications of Herbicide

Between July 1 and November 30, 2019, ReGreen Springfield has begun working on the control of invasive plants in Springfield, as outlined in the contract that is in place with the City of Springfield. ReGreen has initiated the key components of the program, and has established protocols for herbicide application, reporting and determining the effectiveness of applied control measures. Focusing on Forest Park and Blunt Park, initial applications of registered herbicides by injection, and targeted spray techniques, were completed in order to trial test the success of these methods for controlling Japanese Knotweed, the primary focus of our initial eradication program.

We also injected herbicide on a large Japanese Knotweed patch in Van Horn Park. This effort was completed in order to slow the advance of the infestation in the park, which has greatly expanded over the past two years. These applications were completed in late November, as the window for effective control was closing, due to a hard frost. Initial review of the site shows nearly all of the plants have died, and follow-up monitoring will take place in the spring, and additional spot herbicide application will be used to ensure full eradication.

The trial areas treated in the three parks were nearly 3.0 acres in size, and were located in areas not generally accessed by the public (tree nursery, maintenance yards and staff parking areas). This was done in order for our staff to trial test control methods in remote locations where visitors would not be exposed to any potential pesticide residues.

ReGreen Springfield will continue to work in the least traveled areas of targeted treatment areas when control activities begin in 2020, while we work with the Parks Department and the MA Department of Agricultural Resources to develop a community outreach strategy and prepared informational materials that outline the specifics of the Invasive Plant Control Program in Springfield. While these measures are not required by regulation, we feel that this will be a great opportunity to provide residents information on the importance of control of invasive plants on public and private lands.

Licensed Pesticide Applicator Training

Additionally, ReGreen Springfield offered classroom training to several community residents in order for them to take the Massachusetts Pesticide Applicator exam. Five new applicators passed the general Core Exam, and two passed the Right-of-Way License exam. Also, ReGreen Springfield worked with the Hamden County Sheriff's Department to prepare six jail inmates for the Core Exam, and they will be taking the exam on December 9, 2019. The availability of these certified applicators, including community residents and inmates, to assist in applying pesticides will be very useful as we continue to carry out the invasive plant control program in Springfield over the next several years.

Five Year Right of Way Plan and Yearly Operational Plan

Based on discussion with staff from the MA Dept of Agricultural Resources, it was initially determined that in order to commence with any work along right-of-ways (park roads, hiking trails, the Connecticut River Walkway-Bikeway, the proposed McKnight Bicycle Trail and other traveled areas), ReGreen Springfield would need to develop and file a Five-Year Right of Way Plan. This Plan would include a detailed outline of planned invasive control activities, locations, type of control methods, a listing of proposed herbicide chemicals and other pertinent information related to describing what was planned for the next five years of our invasive plant control program.

Working very closely with staff from MDAR, a Five-Year Plan was drafted, and reviewed by their management team in Boston. Additions and edits were made and the Five-Year Plan was submitted for public review. A public hearing was held in Springfield for public comment. This hearing was attended by members of the ReGreen project team. At the same time, we worked with the MDAR team to develop another required product for submission to MDAR; a One-Year Operational Plan for 2020 that outlined specifics of planned activities next year, including a timetable for implementation and completion. Both plans required endorsement by the Mayor, Conservation Commission and Park Department, and letters from each were forwarded to MDAR. Each of the steps along the way required waiting periods by law, so this process took nearly four months to complete, following the July 1, 2019 start of the CPA grant and contract. The Five-Year Right of Way and One-Year Plans impacted the work that we could commence in Springfield, since most of our proposed invasive control will take place along right-of-ways.

The preparation of the plans took a considerable amount of time by ReGreen staff, community volunteers and others. However, the preparation of these plans provides a roadmap to the successful implementation of the invasive plant program in Springfield.

On November 1, 2019 a hearing was held at the MA Fish and Wildlife Headquarters in Westborough, at which time the Five and One-Year Plans were to be reviewed by the Massachusetts Pesticide Advisory Board, which would determine a favorable recommendation for approval or require more information and edits to the plans. David Bloniarz and Nico Agruso attended to present on behalf of ReGreen Springfield. A five-minute overview of the plans was presented, as well as presentation on the steps taken to ensure a complete and timely submission, with the help of MDAR staff. A few questions from the Board were received and answered. During the hearing questioning, it was determined by the Board that the work proposed in Springfield was

all related to invasive plant control, and therefore no plans were required. They determined that according to their latest guidance, no Five-Year ROW Plan was needed since only invasive plants were being controlled. They also determined that, since only invasive plants were part of our program, we do not need to submit One-Year Operational Plans. These findings were completely opposite of what the MDAR staff told us, which led to some frustration on our part, since the process of plan approvals (that were not ever needed) led to a four-month delay in moving forward. However, now we have a 'roadmap' for the next five years, which is a welcomed outcome of the effort. The Five and One-Year Plans are included in this report update.

Planned Activities - December 2019 and 1st Quarter 2020

The following activities are planned for this year, and for the first quarter of 2020:

- Request an extension of Contract # 20200034 until June 30, 2020. This extension is needed due to the delay in beginning work on right of ways during 2019.
- Develop informational outreach and marketing materials related to the Invasive Plant Control Program.
- Conduct two community engagement meetings with neighborhood residents, outlining the threat of invasive plants.
- Meet with the Springfield Parks Commission, Conservation Commission and the CPA Committee to provide updates on the project to date, and plans for advancement of activities in 2020.
- Recruit additional residents for participation in the program , in any volunteer capacity.
- Establish an updated work plan for April - June 2020, to include mechanical control, monitoring and mapping of all work activities.
- Establish a scientific study, in partnership with the University of Massachusetts, the US Forest Service, MDAR and the Springfield Parks Department to study alternative invasive control measures in several project areas.
- Commence field work in late March 2020.

Five Year Vegetation Management Plan for Springfield, MA (2019-2023)

prepared by

ReGreen Springfield, Inc., Invasive Plant Program



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A) GENERAL STATEMENT OF GOALS AND OBJECTIVES

ReGreen Springfield, Inc., is an IRS recognized 501(c)3 non-profit, environmentally focused community education, advocacy and greenspace enhancement organization located in Springfield, MA. ReGreen Springfield is committed to control of hazardous, nuisance, and invasive plants throughout the city of Springfield, through its ReGreen Springfield, Inc. Invasive Plant Program (IPP), including all of Springfield's parks and open spaces, as well as Rights-of-Ways (ROW). All work to be undertaken by ReGreen Springfield, Inc. will be reviewed and authorized by appropriate City of Springfield Department, not limited to Dept. of Facilities, Parks and Recreation, Dept. of Public Works, Dept. of Health and Human Services, and the Conservation Commission. ReGreen will follow best practices to effectively manage the invasive plants, while minimizing pesticide exposure to the environment and follow all rules and regulations established by the Massachusetts Department of Agricultural Resources Pesticide Program (MDAR) and the US Dept. Environmental Protection.

The Integrated Pesticide Management Plan (IPM) will use selective treatment to target invasive plants (see Massachusetts Prohibited Plant List located at <https://www.mass.gov/service-details/massachusetts-prohibited-plant-list>). We will record the sites with invasive plants using the Early Detection and Distribution Mapping System (EDDMapS) national database of invasive plants, administered in Western Massachusetts by the Trustees of the Reservations. The long-term goal of the ReGreen Springfield, Inc. IPP is to control invasive species throughout Springfield. In early years we will focus on high priority areas such as Forest Park, other parks, and sites that have the highest potential to spread. ReGreen's efforts are aimed at slowing the spread, and ultimate manageable control of invasive plants, management of ROW, and not control of any native or desirable vegetation.

B) IDENTIFICATION OF TARGET VEGETATION

Invasive plants, primarily Japanese knotweed, threaten many of Springfield's parks, open spaces, and trails. Invasive plants have already taken over large stretches along the Connecticut RiverWalk and the proposed McKnight trail, with many smaller numerous infestations in other parks and open spaces, as well as other ROW and non-ROW, public and private property. We have consulted with the Conservation Commission to identify sensitive areas, some ROW and some not ROW. Over the past year, ReGreen Springfield, Inc. has documented hundreds of sites in Springfield that contain Japanese knotweed and phragmites, and will continue to expand the documentation, using OutSmart and EDDMapS database program, which includes GPS mapping, providing an opportunity to analyze and document the largest, and most threatening outbreaks of invasive plants growing in Springfield.

C) INTENDED METHODS OF VEGETATION MANAGEMENT AND RATIONALE FOR USE

The primary invasive plants in Springfield's ROWs are Japanese knotweed and phragmites, which require the use of herbicides for full and effective control. Measures will be taken to prevent spread of the invasive plants (e.g. not spread root materials, canes or seeds). If invasive plants (such as garlic mustard) can be well controlled without the use of herbicides, then non-chemical measures, such as mechanical or physical methods, will be used.

MECHANICAL METHODS:

Mechanical control of knotweed and phragmites include grubbing or hand-pulling seedlings, rhizomes, mature plants, and repeated clipping of knotweed and phragmites. When using mechanical control, precautions will be taken since any live plant part (1/2 inch or larger) may sprout causing unwanted spread of the plants. Plant parts will be disposed of properly and will not be allowed to enter waterways. Stems and roots will be contained or dried with little or no soil. Plant parts will not be composted.

PHYSICAL METHODS:

Physical methods may be employed where mechanical or chemical control is determined to be impractical. These techniques will be utilized as an alternative method only in areas where more conventional methods might be undesirable or impossible. Covering of invasive plants with heavy plastics and geotextile fabrics may be employed in these locations, to lessen the physiological capability of the plants, and to reduce gas exchange via the soil, thereby reducing the viability of the invasive plants. Grazing by cattle, sheep or goats may be used for control in some situations. This method will only be used while the shoots are young before they become woody, and grazing will not be allowed after any herbicide treatments.

HERBICIDE APPLICATIONS:

Only general use pesticides will be used. Herbicides will be used in a very selective manner that will minimize pesticide exposure to the environment and limit pesticides application to only the targeted invasive plants. Japanese knotweed control will be accomplished by treating knotweed with stem injection (using JK injection tool, or other injection guns) of 2 ml of concentrated glyphosate (e.g. Roundup, Rodeo) to canes that are large enough to inject, and foliar spray using a back pack sprayer with 5% glyphosate and surfactant (e.g. Roundup with chemsurf-90 or Accord XRT II) to leaves. The timing of the treatments will be done when the plants are taking nutrients/pesticide to the rhizomes – from late July through early October, a few weeks prior to first hard frost. Mechanical control may also be employed in some areas, consisting of a series of programmed cutting of stems throughout the growing season.

For phragmites, pesticide use to the environment will be minimized by cutting the stems, then injecting glyphosate into each cut stem. For phragmites, we will use a cut and drip technique, in which each phragmites stem is cut with a hand pruner or lopping shears, followed by dripping a herbicide into the hollow stem, with a foliar spray applied to any reemergent plants, or if needed to create a path in very large sites to allow cut and drip technique. See Adirondack Park Invasive Plant Program (APIPP)'s video control phragmites which details the technique <http://bit.ly/2yswd8R>.

Alternative control measures may be used for specific other invasive plants. If wild parsnip is found, the primary control method will be mowing or cutting the plant close to the ground when it is flowering, prior to going to seed. Garlic mustard can be controlled by mechanical methods. Should invasive plants be found other than those described above, the yearly operating plan would detail management of those plants.

All pesticide applications will be performed by Massachusetts licensed pesticide applicators, and ROW treatments will be done by licensed pesticide applicators, with an on-site ROW certified pesticide applicator.

(D) DISCUSSION OF JUSTIFICATION FOR PROPOSED HERBICIDE APPLICATIONS

Certain invasive plants including Japanese knotweed and phragmites cannot be effectively and realistically controlled without the use of pesticides. Cutting knotweed or digging knotweed are not effective as tiny fragments of roots can start new plants. Since knotweed root fragments and the nodes of stems can start new plants, cutting and digging knotweed risks spreading knotweed from plant material. Cut-stem pesticide application and foliar spray of large plants methods are ineffective, as they will not fully kill the rhizomes. The methods we will use (stem injection and foliar spray with glyphosate at the proper time) are very effective to control knotweed.

If certain other invasive plants such as giant hogweed, bohemian knotweed, or giant knotweed are found in Springfield ROWs, these also would require the use of pesticides and the attention of proper authorities/departments. Some invasive plants such as garlic mustard can be managed with mechanical means (pulling out plants by hand, clipping, or mowing), so herbicides would not be used.

(E) METHODS, REFERENCES AND SOURCES FOR IDENTIFYING SENSITIVE AREAS AND CONTROL STRATEGIES PROPOSED FOR SENSITIVE AREAS.

ReGreen Springfield, Inc. will continue to assess locations in Springfield that contain invasive plants, and determine, at each location, whether they are ROW or non-ROW, sensitive or non-sensitive, public or private, and publicly owned lands or private property. ReGreen Springfield, Inc. will collaborate with the Springfield Conservation Commission to determine which locations are sensitive (and which category) and develop a GIS database and maps which designates sensitive areas, to ensure that proper regulations are followed for those locations. Invasive plants requiring pesticide treatment in sensitive areas that allow pesticides to be used will be treated with glyphosate (e.g. Rodeo), which is on the Massachusetts Rights of Way Sensitive Areas Materials List. Prior to each yearly operational plan the Sensitive Areas Material list will be checked to ensure that any pesticide proposed for use remains on the List. Pesticide labels will be followed for all herbicide applications, using the lowest labeled rate. As for all treatments, stem injection of knotweed and instillation into cut phragmites plants will be used to minimize pesticide exposure beyond the invasive plants.

SENSITIVE AREAS BASEMAP SOURCES AND REFERENCES

There are several readily available sources of information that can be used to develop a draft sensitive areas basemap. These sources include:

- Massachusetts Department of Environmental Protection (MassDEP) Water Supply Maps (1:25,000).
- Aerial Photographs.
- MassDEP Wetlands Conservancy Maps (scale 1:1,000).
- City of Springfield GIS Mapping Office (Dept of Planning).
- City of Springfield Conservation Commission maps and records.
- Pioneer Valley Planning Commission maps and records.
- U.S. Fish and Wildlife Service National Wetlands Inventory Maps.
- Massachusetts Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP).
- Available MassGIS maps (MassGIS Oliver)

Prior to commencement of any herbicide application operations, applicator staff will be provided with a map, and associated documentation, which denotes sensitive areas, and applicators will survey the area to be treated for any sensitive areas

Restrictions for sensitive area treatments as described in 333 CMR 11.04 will be followed. These include:

Sensitive Area Restriction Guide (333 CMR 11.04)

Sensitive Area	Limited Spray or No-Spray Areas (feet)	Control Method	Time Between Treatment(s)
Public Ground Water Supplies	400'	Mechanical Only	None
Primary Recharge Area Designated Zone II	Designated buffer zone	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

(F) OPERATIONAL GUIDELINES FOR APPLICATORS RELATIVE TO HERBICIDE USE.

Known Location – For any site being treated, the applicator must know that permission has been obtained to treat that site, whether it is a sensitive area (and if so which kind), and whether it is a ROW.

Calibration – Foliar application equipment (back-pack sprayers with hand lever) will have applicator nozzles adjusted to apply a coarse spray to minimize drift. Injection tools will have the injection volume adjusted to 2 ml at the start of the season.

Foliar applications will not be performed during rainy (or forecasted rain within a few hours) or very windy conditions which could take the herbicide beyond the targeted area. If the applicator sees the herbicide moving off target related to wind, the application will stop until the wind has subsided enough to permit further application. Foliar application should apply the spray to the leaves, but not so much as it is dripping off the leaves. Foliar spray for knotweed will be 5% glyphosate with surfactant (e.g. for sensitive areas diluted glyphosate with 5 ml ChemSurf 90 per gallon), and for non-sensitive areas either glyphosate with ChemSurf 90, or a general-purpose glyphosate with surfactant (e.g. Accord XRT II).

Stem injection of knotweed will be performed with 2 ml injection of concentrated glyphosate (e.g. Rodeo) between nodes of each cane large enough to inject, using a calibrated injection gun (e.g. JK Injection Tool). Each cane injected will be marked with an indelible marker to indicate that the cane has been injected. For JK Injection Tools, the marker will be positioned above the needle. Stem injections can be performed even if rainy or windy.

Sensitive Area Restrictions – In defined sensitive areas, there exists a no-spray area where herbicide use is prohibited and a limited spray area where herbicide use is allowed under certain conditions. In areas around sensitive areas where herbicide use is allowed, only the minimum labeled rate of application for the control of target species can be applied. ReGreen Springfield, Inc. expects to limit its primary work to non-sensitive areas, but if critically necessary (as determined by the Springfield Conservation Commission), will use only stem injection methods as prescribed above.

Documents carried by applicator – Applicators will carry on site their pesticide license, herbicide label, fact sheet, VMP, current YOP, Safety Data Sheet, spill kit (plastic bag, absorbent material, shovel), and Herbicide Spill Check List.

On-site Certified ROW applicator – For treatments in ROW, a certified ROW applicator must be on-site to supervise licensed (but not ROW-certified) applicators.

333 CMR 11.00 - ReGreen Springfield, Inc. shall notify the City of Springfield Mayor, Board of Health, Conservation Commission, Dept of Parks, Recreation and Public Buildings, and the Department of Public Works, and Massachusetts Department of Agricultural Resources (MDAR) at least 21 days in advance of the application of herbicides to City ROW. The notice shall include but not be limited to the approximate date on which such spraying shall occur, provided however that said spraying shall not conclude more than ten days after said approximate date; a copy of an MDAR approved Herbicide Fact Sheet on the active ingredient(s) of the herbicide(s) used; and the name and license numbers of the certified applicators and name of the company (if appropriate) who will be making the applications.

(G) IDENTIFICATION AND QUALIFICATIONS OF INDIVIDUALS DEVELOPING AND SUBMITTING A PLAN.

ReGreen Springfield, Inc., with David V. Bloniarz, Ph.D. as President, has extensive experience managing nearly \$2 million in efforts to plant trees in Springfield following the June, 2011 tornado, and looks forward to being involved with this important effort at invasive plant control. ReGreen Springfield, Inc. has successfully recruited community residents, student interns for its current projects, and plans to recruit additional interns who will become licensed/certified applicators at a much lower cost than that of outside contractors. ReGreen Springfield, Inc. also has much experience using outside contractors, with as they are currently overseeing a \$200,000 contract with Davey Resource Group, one of the country's leading vegetation managers. ReGreen's collaborations with businesses, community organizations, educational partners and government agencies will continue, and be enhanced, through the ReGreen Invasive Plant Program. Dr. Bloniarz is a licensed pesticide applicator in Massachusetts (2018). David has a Ph.D. in Urban Forestry from the University of Massachusetts/Amherst, and is an Urban Forest Research Scientist at the USDA Forest Service Northern Research Station in Amherst. David is also on the faculty of the University of Massachusetts/Amherst Department of Environmental Conservation, and teaches undergraduate and graduate courses that focus on urban forest sustainability and management. David was a member of the City of Springfield Conservation Commission for six years, leaving the commission to establish Regreen Springfield, Inc. in 2011, immediately following a devastating EF-3 tornado which severely impacted Springfield tree canopy and natural systems.

Douglas Johnson, M.D., a Springfield resident, who is helping ReGreen Springfield, Inc. with this plan, has 10 years of experience developing and helping lead a successful invasive plant program (primarily treating Japanese knotweed, also wild parsnip and phragmites) in the Adirondacks of New York (see www.noknotweed.org). His expertise brings practical approaches to the planning and delivery of this program. He is a licensed pesticide applicator in Massachusetts (2018) and certified category 3A pesticide applicator in New York (2008-2018).

(H) A DETAILED DESCRIPTION OF THE IPM PROGRAM, SHOWING HOW IT WILL MINIMIZE THE AMOUNT AND FREQUENCY OF HERBICIDE APPLICATION.

The primary invasive plants in Springfield's ROWs are Japanese knotweed and phragmites, which require the use of pesticides for effective and successful control. Regreen Springfield, Inc. will take all appropriate measures to prevent the spread of identified invasive plants (e.g. not spread root material or canes). If invasive plants (such as garlic mustard) can be well controlled without pesticide, then non-pesticide measures (such as pulling plants) will be used. The control methods selected will be chosen based on a variety of factors and with the goal to achieve a long-term, low maintenance vegetation management program.

Stem injection of knotweed correctly timed provides excellent results, killing the entire rhizome, so that there will be markedly fewer plants and markedly less pesticide required treatment the following year. To ensure effective treatment, we will work to ensure that the treated plants are not cut soon after. Other techniques, such as cut-stem application or foliar spray to large knotweed plants, will not be used in most management settings, as those techniques may not fully kill the rhizome and could lead to the need for further pesticide treatment in subsequent years.

Pesticides will be used in a very selective manner that will minimize pesticide exposure to the environment and limit pesticides just to the invasive plants. This will be accomplished by treating knotweed with stem injection (using JK injection tool, or other injection gun) of 2 ml of concentrated glyphosate (e.g. Roundup) to canes that are

large enough to inject, and foliar spray using a back pack sprayer with 5% glyphosate + surfactant (e.g. Roundup with chemsurf-90 or Accord XRT II) to leaves of plants, that are primarily too small to inject.

Marking canes that have been injects with permanent paint will minimize having more than one injection per cane, reducing excess pesticide from being applied, and help to ensure that all canes are injected.

For phragmites, pesticide use will be minimized by cutting the stems, then injecting glyphosate into each cut stem, providing the most effective control, while reducing any environmental impact to surrounding vegetation or natural systems.

(I) DESCRIPTION OF ALTERNATIVE LAND USE PROVISIONS OR AGREEMENTS

ReGreen will work with Springfield Dept. Facilities, Parks and Recreation, and the Dept. of Public Works (who mow some ROWs) to ensure that knotweed is not mowed for at least 2-weeks after pesticide treatment to allow the herbicide to be taken throughout the rhizomes. For invasive plants which can be controlled by mechanical means, we will encourage mowing (e.g. of garlic mustard and wild parsnip) prior to the plants going to seed. Since knotweed can be treated with much less pesticide exposure to the environment with stem injection (compared to foliar spray), ReGreen will encourage not mowing knotweed (unless needed for safety reasons) prior to stem injection. ReGreen will encourage City agencies that use fill in construction projects to only use clean fill that is not contaminated with invasive plant material. An education program for this purpose is currently being developed by Regreen Springfield, Inc., with delivery expected in early 2019.

(J) DESCRIPTION OF A REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS.

The only pesticides which ReGreen will be using is glyphosate (Rodeo or Accord XRT II). This is a general use pesticide, and is less hazardous than restricted pesticides. A clipboard log of herbicides in the vehicle will be kept in the vehicle. Herbicide labels and fact sheets will be carried on-site by the applicator. The vehicle carrying the 2.5 gallon containers with glyphosate pesticide and injection guns/backpack sprayers will be equipped with a bag of absorbent, leak-proof containers, and a broom and shovel in case of minor spills. Personal Protective Equipment (PPE) will be used by all applicators, including eye protection, chemical resistant gloves, long pants and shirts and high visibility safety vests.

If any spill is observed, immediate action will take place to contain the spill and protect the spill area, as per recommendations prescribed in the MDAR Pesticide Applicator Exam Manual, and noted below. The cause of the spill must be identified. The City of Springfield, or the property owner, and MA DAR, Division of Crop & Pest Services will be notified of the spill immediately, and written documentation of the control measures will be provided within 24 hours. The largest container that will be used for storage of the herbicides noted in this Plan, will be 2.5 gallons, and backpack sprayers contain 4 gallons of diluted chemical, so those would be the largest spill expected while transporting or working in the field.

Minor spills of liquid herbicide will be remedied by soaking up the spill with adsorption clay or other adsorptive material and placing it in leak proof containers, removed from the site and disposed of properly. Minor spills involving dry herbicides, such as granulars, will be swept up or shoveled up directly in leak proof containers, removed from the site and disposed of properly. All contaminated soil will be placed in leak proof containers, removed from the site and disposed of properly.

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

SAFETY CONTACTS

- Herbicide label
- Herbicide Material Safety Data Sheet (MSDS)
- Herbicide Manufacturer
 - DOW AgroSciences Division... (800) 992-5994
- MDAR, Division of Crop & Pest Services... (617) 626-1720
- Massachusetts DEP Emergency Response... (888) 304-1133
- Massachusetts DPH Environmental Toxicology Program...(617) 339-8351
- City of Springfield Dept of Public Parks...(413) 787-6434
- City of Springfield Police Dept...(413) 787-6302
- City of Springfield Fire Dept...(413) 787-6400
- City of Springfield Dept of Public Health...(413) 787-6740
- Chem-Trec... (800)-424-9300
- National Pesticide Information Center... (800)-858-7378
- National Animal Poison Control Center... (888)-426-4435
- Clean Harbors...(800) OIL-TANK
- Massachusetts Poison Information Centers...(800)-682-9211

(K) FOR STATE AGENCIES AND AUTHORITIES AS DEFINED IN M.G.L. C. 3, § 39

Not Applicable

ADDITIONAL ITEMS

MONITORING PLAN

On an annual basis, the ReGreen Springfield, Inc. will evaluate the success of its Vegetation Management Program (VMP). The goal of this monitoring plan is to evaluate the relative success of vegetation control efforts. Following application after an appropriate period of time, treatment areas will be revisited. The survivorship or regrowth of nuisance vegetation will be recorded and evaluated at a meeting with City officials in late fall to determine whether the program is meeting its goals. Discussion items at this annual meeting will include where the herbicide was used, where it worked and the amount of herbicide used in the application period. A written report will be submitted to the City of Springfield departments identified below.

PERMISSIONS

Prior to any application of herbicide, written confirmation and permission will be obtained in writing from the appropriate City of Springfield municipal department, on whose land is under their jurisdiction the application will occur. This includes the following Departments:

- Parks, Recreation and Buildings
- Parks Commission
- Engineering Department
- Department of Public Works
- Conservation Commission
- Springfield Public Schools
- Springfield Housing Authority
- Community Preservation Act Commission
- Springfield Water and Sewer Commission

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Yearly Operational Vegetation Management Plan for Springfield, MA 2019

prepared by

ReGreen Springfield, Inc., Invasive Plant Program



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SUMMARY

A yearly operational plan (YOP) must be submitted to the Massachusetts Department of Agricultural Resources (MDAR) 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 Green Springfield website (www.regreenspringfield.org/yop2019), on the MDAR website (<https://www.mass.gov/service-details/rights-of-way-vegetation-management-vmps-yops-and-notices>) or the Springfield Department of Parks and Recreation, 200 Trafton Road, Springfield, Massachusetts.

Upon receipt of this YOP, MDAR publishes a notice in the Environmental Monitor. The City must also provide a copy of the proposed YOP and Environmental Monitor notice to 5-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, Parks Department, and the Springfield Water and Sewer Commission.

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.

1. INTRODUCTION

In compliance with Commonwealth of Massachusetts' Rights-of-Way Vegetation Management Regulations (333 CMR 11.00) the City of Springfield's Yearly Operational Plan (YOP) details our vegetation management program for 2019.

This YOP is consistent with the terms and procedures set forth in Springfield's 2019-2023 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.

Invasive plants, primarily Japanese knotweed, threaten many of Springfield's parks, open spaces, and trails. Vegetation growing along curbing, within and around paved traffic islands, in cracks in the asphalt, under guide rails along roadways and in areas that cannot be mowed is of concern. This vegetation can be effectively controlled with the use of herbicide applications.

Herbicide applications will be done under the supervision of an individual holding a MDAR 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 Springfield's 2019-2013 VMP.

Springfield'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

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

Supervisor:

David V. Bloniarz, Ph.D.

ReGreen Springfield

1 Federal Street

Springfield MA 01105

413-523-0014

dbloniarz@regreenspringfield.org

Herbicide Applicators:

- Employees and volunteers of ReGreen Springfield who are licensed pesticide applicators by MDAR;
- City of Springfield employees who are licensed pesticide applicators by MDAR;
- Commercial licensed pesticide applicators by MDAR

Invasive plants, including Japanese knotweed and others, threaten many of Springfield's parks, open spaces, and trails. Invasive plants have already taken over large stretches along the Connecticut RiverWalk and the proposed McKnight trail, with many smaller infestations in other parks and open spaces, some of which contain ROWs. Most of the invasive plants in ROW are along the sides of paths or paved walkways or roads.

Treatment areas may also include, but are not limited to, cracks in asphalt, along guide rails, along curbing, within and around paved traffic islands, between sidewalks and the adjacent curbing, and wherever vegetation is causing a public hazard.

A map of Springfield including its roads, parks, and sensitive areas near wetlands and rivers is <https://maps.springfield-ma.gov/gis/>

Treatment areas include rights-of-ways within the city of Springfield.

4. IDENTIFICATION OF TARGET VEGETATION

Target Vegetation:

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

Public nuisance vegetation includes, but is not limited to, Japanese knotweed and phragmites.

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. Invasive species include Japanese knotweed and phragmites. 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-wayvegetation-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.”

Control Strategies for Sensitive Areas are listed in the table below. Springfield does not include any public Ground Water, Recharge areas, or private drinking water supplies, but the other areas are relevant.

The GIS mapping system identifies sites within 100’ of wetlands, waters, and rivers in Springfield. <https://maps.springfield-ma.gov/gis/>

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.

6. Identification Methods

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

Two 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
- 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)
- Conferring with the Springfield Conservation Commission
- GIS mapping system. <https://maps.springfield-ma.gov/gis/>

A point person verifies, identifies and where appropriate marks sensitive areas and any additional areas that may require special precautions

7. PROPOSED HERBICIDE TREATMENT METHODS

Springfield's VMP describes a number of proposed treatment methods. For 2019 the

Chemical (Herbicide Applications) Methods

1. **Foliar Treatments:** the selective application of herbicides diluted in water, used at the lowest label rate, to the foliage of target vegetation. The equipment used will be back pack sprayer, which uses low pressure (60 PSI or less) at the nozzle, for applications. Foliar applications to Japanese knotweed will be to plants too small to inject with glyphosate and surfactant and be timed when the plant is taking nutrients to its rhizomes (late July through early October). The timing of treatment to other invasive plants such as wild parsnip or poison ivy would occur prior to leaves falling off the plants.

a. **Back pack sprayers** include hand pump or motorized backpack sprayer or squirt bottles. This technique is excellent for spot treatments, such as localized Poison Ivy infestations.

2. Stem injection of Japanese knotweed

Japanese knotweed control will be accomplished by treating knotweed with stem injection (using JK injection tool, or other injection gun) of 2 ml of concentrated glyphosate (e.g. Rodeo or equivalent) to canes that are large enough to inject. The timing of the treatments will be done when the plants are taking nutrients/pesticides to the rhizomes – from late July through early October, a few weeks prior to first hard frost

3. Cut and drip treatment of phragmites

For phragmites, pesticide use to the environment will be minimized by cutting the stems, then injecting glyphosate into each cut stem. For phragmites, we will use a cut and drip technique, in which each phragmites stem is cut with a hand pruner or lopping shears, followed by dripping an herbicide into the hollow stem, with a foliar spray applied to any emergent plants, or if needed to create a path in very large sites to allow cut and drip technique. See Adirondack Park Invasive Plant Programs (APIPP) video control phragmites which details the technique <http://bit.ly/2yswd8R>.

8. PROPOSED HERBICIDES, CARRIERS, ADJUVANTS AND RATES

Springfield will only use herbicides with the active ingredient glyphosate. The Herbicide Label will be followed.

For sensitive areas, we will use Rodeo and Accord which are on the Commonwealth of Massachusetts recommended herbicides from the *Sensitive Area Materials List*.

Complete information on Rodeo includes Herbicide Label RODEO:

<http://www.cdms.net/ldat/ld4TN013.pdf>

Complete information on Accord Concentrate includes Herbicide Label Accord Concentrate:

<http://www.cdms.net/ldat/ld4TL015.pdf>

Rodeo and Accord have active ingredient glyphosate, EPA registration number 62719-324.

For foliar spray, water will be used to dilute to make a 2-5% solution (5% for Japanese knotweed, 2% for other), and surfactant (ChemSurf 90 1 tablespoon per gallon) will be added.

For stem injection, an injection gun will be used to inject 2 cc of concentrated Rodeo or Accord into each stem.

For non-sensitive areas we would either use Rodeo or Accord as above, or Accord XRT II (without added surfactant).

Complete information on Accord XRT II includes Herbicide Label

<http://www.cdms.net/ldat/ld8BH027.pdf>

Accord XRT II has active ingredient glyphosate, EPA registration number 62719-556

9. 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. We will only be using glyphosate herbicide, with the addition of water and surfactant for foliar spray to backpack sprayers. Filling of the backpack sprayers will be done outside of 100 feet of a sensitive area, with care exercised during all mixing, handling and loading in order to prevent careless spills or splashes. No herbicide concentrates will be mixed within one hundred feet of a sensitive area. However, since stem injection involves using glyphosate concentrate there will be glyphosate concentrate (e.g. Rodeo or Accord) in the injection guns used to do the treatments in sensitive areas.

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

10. ALTERNATE CONTROL TECHNIQUES

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

Monitoring: 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.

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. Stem Injection (Japanese knotweed)
3. Cut and drip (phragmites)

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 ReGreen for at least 3 years.

11. TREATMENT RECORDS

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

- A. Date, name and address and license numbers of certified and licensed 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.

12. 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 (*Herbicide Spill Checklist*) 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 will not be used. 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 MDAR 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
- Diesel Fuel
- Bar and Chain Oil
- Gasoline
- Motor and Hydraulic Oil/Fluids
- 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
- Shovel
- SDS (Safety Data Sheet)
- Product Label
- Flagging
- Product Fact Sheets (when applicable)
- Leak Proof Container
- Appropriate Adsorbent Material
- 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 below

HERBICIDE SPILL CHECK LIST (See next page)

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 Springfield DPW representative.

Table 5: HERBICIDE SPILL CHECK LIST

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. Dept. of Environmental Protection and MDAR:		
	MDAR, Pesticide Bureau	(617) 626-1700	
	Massachusetts Department of Environmental Protection Emergency Response Section	MA DEP 24 Contact Number: (888) 304-1133	
		Southeast Region: (508) 946-2700	
		Northeast Region: (978) 694-3200	
Central Region: (508) 792-7650			
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	
	Product Manufacturer(s): Dow Agro Science	800-992-5994	
	Pesticide Hotline	(800) 858-7378	
	Chemtree	(800) 424-9300	
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		