

Cover letter and summary of qualifications								
	Contact	Executive Summary	Educational Background	Insurance Statement	Performance Guarantee	Pesticide License	Gear	Demonstrated Knowledge
Got Weeds?	X	O	X	X	O	NA	NA	NA
New England Forestry Consultants	X	X	X	X	X (85%)	X	X	E
Redstart	X	X	X	X	X (98% Buck) (95% Knotw)	X	X	X

Methodology						
	CC Mtg Before	Timing of Treatment	Access control During Trtmnt	Status Report Presentation	MSDS	Safety Plan
Got Weeds?	X	X	NA	X	NA	NA
New England Forestry Consultants	X	X	E	X	E	X
Redstart	X	X	E	E	X	E

References								
	Cost	Timeline	Summary #1	Dates	Contact	Summary #2	Dates	Contact
Got Weeds?	\$1,333.00	X	X	X	X	X	X	X
New England Forestry Consultants	\$3,519.00	X	X	E	E	X	E	X
Redstart	\$6,390.00	X	X	X	X	X	X	X

Weak	O
Not provided or weak	E
Provided	X
Provided and strong	X

## Austin Invasives Control RFP review

May 13, 2017

### Review Criteria

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1. Cost
2. Experience
3. References
4. Past Performance
5. Efficacy of Method

### NEFC:

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#### Notes

- ✓ Cheaper but lacking in detail.

#### Pros:

- ✓ Concise
- ✓ Met RFP requirements.
- ✓ Cost (\$3,519.00)
- ✓ Schedule fits within this season.

#### Cons:

- ✓ Did not spell out what chemicals or provide MSDS
- ✓ Lacking contact on one reference
- ✓ Referenced projects do not cover Knotweed control
- ✓ One year timeline – no 2018 treatments or follow up

### Redstart:

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#### Notes:

- ✓ Indicated manual control is futile

#### Pros:

- ✓ Comprehensive and professional response
- ✓ Met RFP requirements.
- ✓ Schedule fits within this season and next
- ✓ Comprehensive staff
- ✓ Provided MSDS as requested
- ✓ Combines cut-stump and foliar application
- ✓ Noted consultation of RTE database prior to start
- ✓ Notes seeking proper permit and mitigation measures specific to the wetland.
- ✓ Experienced with Knotweed control
- ✓ Multi (2 year at least) approach
- ✓ Notes timing and reasoning why for Knotweed and, separately, buckthorn control
- ✓ Note tackling Honeysuckle as well during buckthorn control as they are spatially co-incident
- ✓ Notes CC tasks of seeding after spraying to fight Dame's rocket
- ✓ Good references including riparian zones, recreation areas, and sensitive zones

#### Cons:

- ✓ Cost (\$6,390.00)

## Got Weeds?

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### Notes:

- ✓ Different approach – mechanical and volunteer based
- ✓ A bit preachy about methodology with questions/statements
- ✓ Notes restoration of floodplain forest problematic as the seed bank is no longer there
- ✓ Methodology is a working workshop in Fall 2017 and follow up in spring 2018

### Pros:

- ✓ Volunteer based – community involvement and buy-in
- ✓ Mechanical – no chemicals
- ✓ Notes importance of focusing on the Mill Brook to prevent knotweed from moving up.
- ✓ Reference is Kristin Sharpless for work done in Stowe
- ✓ Notes education, experimentation, and public involvement
- ✓ No site or access closures due to chemicals or eradication activities
- ✓ Can provide support (under different SOW) for Stewardship Planning

### Cons:

- ✓ Volunteer based requires deep CC (and/or partner) coordination
- ✓ Stewardship Plan as critical to the ongoing volunteer management/engagement
- ✓ Noted Knotweed control should be early May and the time frame is tight
- ✓ Wants to pile brush on-site
- ✓ Proposal does not address Knotweed – speaks to how it could be done but without the stewardship plan he cannot estimate the LOE.
- ✓ Notes coordination activities for knotweed control would be Dec-March and so would not deal with it until next year.
- ✓ Relies on community involvement – if none then noted as not the right approach

## Summary:

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Looking at three proposals of differing characteristics.

1. NEFC is short concise and to the point. Cheaper but lacking in detail. Timeline is questionable and could cost more in the end after year two follow ups.
2. Redstart is more comprehensive and professional. More expensive up front but longer time line likely more efficacious.
3. Got Weeds Is a mechanical approach leveraging/requiring community involvement and a stewardship plan. Success dependent on CC/Partner involvement.

## Evaluation:

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- ✓ If no community involvement Got Weeds is out
- ✓ If cost is an issue then Redstart is out
- ✓ If best chemical response is paramount Redstart wins
- ✓ If cost is paramount NEFC or Got Weeds wins
- ✓ If efficacy is paramount then Got Weeds is questionable
- ✓ If chemicals are out then Got Weeds wins

- ✓ If offloading process due to workload is paramount Got Weeds is out
- ✓ If adherence to VLT plan is paramount Redstart wins



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May 5<sup>th</sup>, 2017

Tom Dean  
Waitsfield Conservation Commission

RE: Invasive Plant Treatment on the Austin Parcel, Waitsfield, Vermont

Dear Mr. Dean,

Redstart Natural Resource Management (Redstart) is pleased to offer a bid in response to your request for proposals for invasive plant treatment on the Austin Parcel in Waitsfield, Vermont. Redstart is a multi-field natural resource consulting firm, based in Corinth, Vermont. We have extensive experience in treating non-native plants throughout the state and working for a wide range of clients in addressing the threat they pose to natural ecosystems.

It is our understanding that you wish to treat approximately 5 acres of invasive plants, namely Japanese knotweed, common buckthorn, and honeysuckle. We understand your vision is to treat the invasives so that you can establish a native riparian planting. We also are aware that you acknowledge that long-term treatment may be required to combat the invasive plants in this area, and we applaud this vision.

As you will see in our proposal below, we suggest treating these plants using targeted herbicide applications over two years, if not longer. We approach invasive plant treatment using integrated pest management (sometimes including manual treatment) for all of our projects. After reviewing this site, however, we feel herbicide treatment is necessary to achieve your desired goals and that manual efforts will be futile. We have weighed options with respect to cost, success, and mitigation to the surrounding environment, and believe our approach will have the highest rate of success with respect to all of these.

Thank you for the opportunity to submit this letter. Please feel free to contact us if you have any questions. We look forward to hearing from you.

King Regards,  
Markus Bradley and Charlotte Uden

## 2. Summary of Qualifications

2a. Redstart has seven (7) full time staff members who are available to work on this project.

<b>Name</b>	<b>Job Title</b>	<b>Years of Experience</b>	<b>Education/License</b>
<i>Markus Bradley</i>	<i>Forester, Company Partner, Invasive Plant Supervisor</i>	8	<i>B.S. in Forestry. Certified Pesticide Application in the State of Vermont. Game of Logging Chainsaw Safety Levels 1-4.</i>
<i>C. Dana Hazen</i>	<i>Invasive Plant Crew Leader, Forest Technician</i>	5	<i>B.S. in Forestry. Game of Logging Chainsaw Safety Levels 1-2. Certified pesticide applicator in Vermont.</i>
<i>Tyler Mousley</i>	<i>Invasive Plant Crew Leader, Forest Technician</i>	5	<i>B.S. in Forestry. Certified pesticide applicator in Vermont. Game of Logging Chainsaw Safety Levels 1-2.</i>
<i>Drew Harding</i>	<i>Forest Technician, Invasive Plant Crew Member</i>	2	<i>B.S. degree in Wildlife Ecology. Certified pesticide applicator in Vermont. Game of Logging Chainsaw Safety Levels 1-2.</i>
<i>Charlotte Uden</i>	<i>Forest Technician, Invasive Plant Crew Member</i>	2	<i>B.S. degree in Forest Ecology. Certified pesticide applicator in Vermont. Game of Logging Chainsaw Safety Levels 1-2.</i>
<i>William Musson</i>	<i>Forest Technician, Invasive Plant Crew Member</i>	2	<i>Working towards a B.S. in Forest Operations and a minor in Geographic Information Systems. Certified pesticide applicator in Vermont. Game of Logging Chainsaw Safety Levels 1-2.</i>
<i>Conner Tilton</i>	<i>Forest Technician, Invasive Plant Crew Member</i>	1	<i>A.A.S. degree in Forest Technology and A.A.S. degree in Arboriculture and Landscape Management. Game of Logging Chainsaw Safety Levels 1-2.</i>

2b. Redstart holds a company commercial pesticide applicator license in which there are six (6) staff members who are currently certified in Category 2 (Forest Pest Control) and Category 10 (Demonstration and Research). These licenses are current and are maintained through meeting the educational requirements laid out by the Vermont Agency of Agriculture, Food, and Markets.

All licenses can be provided to the Conservation Commission before beginning the work. Redstart carries a higher than normal liability insurance policy (\$5 million) and full workman's compensation insurance.

2c. Redstart does not typically provide performance guarantees for the full eradication of invasive plants because we recognize the ongoing challenge of treating many of these plants. We do expect a 98% success rate in killing mature common buckthorn plants using cut stump treatment after one treatment and a 98% rate in killing mature honeysuckle plants after two rounds of foliar treatment. These rates do not account for re-sprouting plants from seedbanks in the years to come. In addition, we have found Japanese knotweed to be very challenging to fully eradicate, especially in places where there are significant populations in adjacent areas. After two rounds of foliar herbicide treatment we expect a 95% kill rate of the initial population, though additional follow-up treatment may be needed for two to four years to treat lingering populations.

The cut stump and foliar herbicide applications proposed for the common buckthorn and honeysuckle treatments are very targeted methods that help mitigate damage to surrounding native plants.

2d. See above, 2b.

2e. Below is a table listing all of the equipment that Redstart owns and can use to complete this project.

<b>Redstart Owned Equipment</b>		
<b>Type</b>	<b>Make/Model/Year</b>	<b>Quantity</b>
Oil Based High Pressure, Low Volume Backpack Sprayers	Birchmirer Iris	2
SP2 System Backpack Sprayers	2011	4
Solo Backpack Sprayers	2009, 2010, 2011	2
Stihl Mistblowers	SR 420	2
Chainsaws	Husqvarna, Stihl	6
Pressurized hand-held spray bottles	Tolco	5
Transportation vehicles	F-150	1
Arctic Cat	AC300	2

As shown above in 2a, Redstart has seven (7) applicators who are willing and able to perform this work.

Redstart is familiar with the proposed treatment methods and herbicides as well as State and Federal regulations that oversee commercial herbicide application. We have spent several years honing in on appropriate treatment methods for individual invasive plant species and feel the methods we propose provide the best long term management with consideration to financial cost and protection of the environment. Redstart works with a professional commercial pesticide dealer to purchase restricted-use herbicides and all herbicides are stored in a secure facility at the Redstart office. All application of herbicides will be done in accordance with the herbicide label, State and Federal regulations, and under the direct supervision of a licensed pesticide applicator of the

Redstart staff. Herbicide labels and Material Safety Data Sheets (MSDS) of the herbicides we propose using are attached to the email submitted to Mr. Dean.

2f. All Redstart employees have been educated in and have experience with Vermont's native habitats. Because of this experience, they are proficient in identification of invasive, native, and several rare, threatened, and endangered (RTE) species in the state of Vermont. Redstart's invasive crews have worked in wetlands, riparian area and other sensitive habitats. We are aware of the permitting process and the appropriate types of herbicides and methods to be used in each environment. As a matter of protocol, Redstart consults Vermont's Agency of Natural Resources (ANR) Atlas to check sites for RTE species, wetlands, and vernal pools. The southern extent of the Austin site is mapped by Vermont State Wetland Inventory (VSWI) as containing a wetland, therefore appropriate permitting and mitigation measures will be sought during treatment.

### **3. Methodology**

On May 2<sup>nd</sup>, Charlotte Uden from Redstart met with Tom Dean from the Waitsfield Conservation Commission on site to assess the Austin Parcel. Prior to the work commencing we are more than happy to meet further with any member of the Conservation Commission to discuss any questions or concerns.

Several non-native invasive plants were found on the property. The treatment methods (including the application method and type of herbicide) and timing is discussed below. All herbicides proposed for this site are permitted to be applied in riparian areas and carry riparian-approved labels.

#### **Japanese knotweed**

Japanese knotweed is found primarily along the river banks of the property. It is our understanding that only the 5 acre future planting area is requested to be treated. The percent cover of this 5 acre area is between 50-75%. Redstart has had experience treating significant populations of knotweed and would be open to discussing treating additional areas if desired by the Conservation Commission, though on the 5 acre area is included in the proposed cost.

Our extensive experience in treating Japanese knotweed makes us confident that an herbicide application is the only way to successfully kill this plant; we have known of several manual efforts that have proven to be unsuccessful. From our experience, the most ideal time to treat Japanese knotweed is in late August, when the plant is in flower and two weeks before a killing frost. The size and extent of these plants make a foliar herbicide application (backpack spraying) the best method of treatment.

In places where large patches of knotweed exist and vehicle access is good, we propose using a motorized mistblower to apply an herbicide using a foliar application. This method will only be used when wind conditions are below 5 mph to reduce the chance of drift to non-target species. Blue indicator dye will also be added to the herbicide solution to indicate spray patterns. We will use a 2% concentration of Rodeo brand herbicide (active ingredient glyphosate, EPA Registration #62719-324) for this treatment method.



In other areas where small, isolated sprouts are found we will use a Birchmeier backpack sprayer with a solution containing an 8% concentration of Rodeo brand herbicide (active ingredient glyphosate, EPA Registration #62719-324) and 0.5% concentration of Polaris brand herbicide (active ingredient imazapyr, EPA Registration 228-534). This method is more targeted, and will help reduce the potential harm to non-target plants. This method will also be used for the second round of treatment, proposed for 2018.

\*\*After the initial treatment is completed in 2017, we suggest that the Conservation Commission seed the treated area with a native grass seed to discourage other invasive plants (namely Dame's rocket) from establishing in this area. This should be done in the fall of 2017 or spring 2018. This task is not included in Redstart's budget proposal.

### **Common buckthorn and Honeysuckle**

Common buckthorn and honeysuckle are also found on the site. Several of the common buckthorn plants are large (over 10-15 feet tall), though there are also smaller shrubs as well. The honeysuckle is also mature and comprises the forested understory in the south part of the treatment area. Treatment of these plants can happen at the same time as the Japanese knotweed treatment, towards the end of August.

For any large common buckthorn plants we propose using a cut stump treatment in which the plants are cut with a chainsaw and the freshly cut stumps are treated using a 25% concentration of Rodeo brand herbicide (active ingredient glyphosate, EPA Registration #62719-324) in a waterbased solution. For all remaining buckthorn plants we propose using an 8% concentration of Rodeo brand herbicide (active ingredient glyphosate, EPA registration #62719-324) and a 0.5% concentration Polaris brand herbicide (active ingredient imazapyr, EPA Registration 228-534) in Thinvert RTU carrier using a Birchmeier backpack sprayer. Because the honeysuckle plants overlap spatially with common buckthorn we feel they should also be treated at the same time. This method will also be used for the second round of treatment, proposed for 2018.

## **4. References**

Since 2006, Redstart has had extensive experience treating non-native, invasive plants across Vermont. Redstart has completed non-native, invasive plant treatment for the several Vermont municipalities and towns, the Green Mountain National Forest, Vermont Forests, Parks and Recreation, The Nature Conservancy, the Vermont Land Trust, and the Marsh-Billings-Rockefeller National Historical Park. In addition to working for these clients, a large portion of Redstart's invasive plant treatment work is for private landowners in Vermont. We have completed treatment work for over 150 private landowners, ranging from southern to northwestern portions of the state. Many of these projects have been completed in accordance with the NRCS through their Wildlife Habitat Incentive Program (WHIP) and Environmental Quality Incentive Program (EQIP).

Below is a list of previous projects Redstart has completed and the appropriate contacts for each. We would be happy to provide further references if requested.

Title of Project	Year Completed	Client	Contact Person	Overview of Project
<p><i>Annual Treatment at Marsh-Billings-Rockefeller National Historical Park</i></p> <p><i>In Woodstock, Vermont</i></p>	<p><i>Annual</i></p>	<p><i>National Park Service US Department of the Interior</i></p>	<p><i>Kyle Jones (802) 457-3360 Ext. 30</i></p>	<p><i>Annual work has included manual and herbicide application treatment of several invasive plant species on the entire 350 acre property. Annual budgets range from \$7,000-10,000. Treatment work included manual hand pulling, foliar backpack application and cut stump application. Work has also included treatment of terrestrial invasive plants growing near sensitive areas such as wetlands and ponds.</i></p>
<p><i>Invasive Plant Treatment Projects on King Farm</i></p> <p><i>In Woodstock, Vermont</i></p>	<p><i>2011 to present</i></p>	<p><i>Vermont Land Trust</i></p>	<p><i>Pieter VanLoon (802) 251.6008</i></p>	<p><i>Annual work has included herbicide application treatment of several invasive plant species on the parcel owned by The Vermont Land Trust including common buckthorn and honeysuckle. Treatments have been completed in sensitive areas (such as pond edges) and in areas where high-use from recreation has been of importance.</i></p>
<p><i>Forest Riparian Buffer Tree and Shrub Planting</i></p> <p><i>Groton, Vermont</i></p>	<p><i>2016 and 2017</i></p>	<p><i>Clough Farm, private landowner in partnership with Conservation Reserve Enhancement Program (CREP)</i></p>	<p><i>Ben Gabos (802) 461-3814</i></p>	<p><i>The main goal of this project was to restore a native riparian buffer along the Wells River. In 2016, Redstart treated approximately 14 acres of riparian area for Japanese knotweed and other invasive plants. Following the herbicide treatment, Redstart planted a total of 4,025 trees and shrubs to re-establish the buffer. A follow-up herbicide treatment of all invasive plants will be conducted in the late summer, 2017.</i></p>

## 5. Project Cost

Below is a fixed-price bid for Redstart to complete the work outlined above. At a minimum, we propose a **two year** treatment plan and offer costs as such, but recognize additional treatments may be necessary beyond that, at which point Redstart and the Conservation Commission could re-negotiate how to move forward with future work and payment structure.

Project costs are based on Redstart's billable hourly rate of \$57.50 for labor and for one-way travel. The cost of herbicides used in treatment is passed directly onto the landowner essentially at cost. Treatments and herbicide costs are estimated on a per acre basis.

Associated Costs		Cost		
Planning, Site Visit, Meeting with Conservation Commission		\$345.00		
Invasive Plant Treatment Costs		Labor Cost	Chemical Cost	Total
<b>Foliar spray- Japanese knotweed</b>	Year 1	\$1,500	\$150	\$1,650
	Year 2	\$920	\$75	\$995
<b>Cut stump- common buckthorn</b>	Year 1*	\$250	\$75	\$325
<b>Foliar spray- common buckthorn and honeysuckle</b>	Year 1	\$1,625	\$575	\$2,200
	Year 2	\$575	\$300	\$875
<b>Year 1 Sub-Total (plus Associated Cost)</b>		<b>\$4,520</b>		
<b>Year 2 Sub-Totals</b>		<b>\$1,870</b>		
<b>Proposed Total Cost</b>		<b>\$ 6,390</b>		

\*A second year is not needed for this treatment method.

## 6. Proposed Timeline

August-September 2017 (Year 1)

- Foliar spray Japanese knotweed
- Cut stump large common buckthorn
- Foliar spray smaller common buckthorn and honeysuckle

November 2017 or May 2018

- Conservation Commission spread grass seed on treated Japanese knotweed site

August-September 2017 (Year 2)

- Foliar spray Japanese knotweed
- Cut stump large common buckthorn
- Foliar spray smaller common buckthorn and honeysuckle