



WIGMORE FOREST RESOURCE MANAGEMENT
1601 WEST ROAD
ASHFIELD, MA 01330
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wfrmanagement@gmail.com

Northborough Conservation Commission
Attention Mr. Gregory Young
Planning and Engineering Office
Northborough Town Hall
63 Main Street
Northborough, MA 01532

Dear Mr. Young:

Thank you for the opportunity to submit a price quote for the silviculture and public outreach projects on your community forest ecosystems. Our business specializes in public outreach education and communication efforts about forest ecosystem stewardship. We believe that we could collaborate well with your community and care for your precious forest in a manner that you will respect. We understand how a community holds a vision and an idea about what their woods represent and offer to them. We would hold this vision dearly and help your community to work towards it while managing the forest ecosystem. I am available to meet with your Commission to review this proposal and answer any questions you may have about it or our work.

Sincerely;

Mary K. Wigmore
Mary K. Wigmore

Proposal Response to A Scope of Services Request from the Northborough Conservation Commission



Prepared For: Northborough Conservation Commission
63 Main Street
Northborough, Massachusetts 01532
Attention: Mr. Gregory Young, Chair

Prepared By: Wigmore Forest Resource Management
1601 West Road
Ashfield, Massachusetts 01330

July 21, 2023

Proposal For Forest Management Services on Town Owned Conservation Lands

Prepared for: Northborough Conservation Commission

Prepared by: Mary Wigmore, Wigmore Forest Resource Management

Submission Date: July 21, 2023

Section A: Executive Summary

Wigmore Forest Resource Management manages over 15,000 acres of municipal lands. We have completed detailed Massachusetts Forest Stewardship Climate Management Plans for all this acreage. These resource management plans exceed State guidelines and address complicated issues such as climate adaptation silviculture, enhancement of forest resiliency to a changing climate, songbird habitat enhancement, maximization of carbon sequestration and storage, and water quality protection. We stay current with the scientific research for ecological forestry and climate resiliency silviculture. The stewardship of forest resources is moving in a new and exciting direction, which views the forest not as a source of commodities, but as a living, dynamic system.

We practice ecological silviculture, which is an approach that applies the understanding of structure, function, and dynamics of natural forest ecosystems to achieve integrated environmental, economic, and social outcomes. It is a way of thinking about your forest ecosystem and its management that fundamentally differs from a timber-focused forestry with the forest's health, vigor, and productivity as its core. We advocate this approach for your forests to integrate your community's needs, expectations, and future vision with its stewardship in this time of unprecedented climate change.

When we work on your forest lands, we start with a simple assessment of its vulnerabilities to our changing climate, as well as to everyday forest stressors (pest, pathogens, weather). We also determine its strengths and resilience capacity to climate and normal stress. These tasks help us to evaluate its capacity to cope with our coming climate crisis and gives us insight into how your forest might adapt or change as our world changes. After this analysis we can identify adaptation and

mitigation actions in response to the current and possible future condition of the forest ecosystem.

Political changes in the attitudes of local communities to forest management and increasing environmental regulations require that a forest manager have the communication skills necessary to provide support and advocacy for Northborough's forestry program. WFRM will offer this support through scheduled site tours on the properties to your Commission and the broader, presentations about ecological silviculture program, and attendance at relevant community meetings that relate to the stewardship of these forests. We believe that the best advertisement for the success of your forestry program is a high standard for all silvicultural and timber harvest projects through use of excellent professional harvesters and strict contract supervision.

The decisions that your Town makes now affect how well your forest can handle future droughts, severe storms, , or cope with insect or disease outbreaks. The most important thing that you can do to protect your forest's capacity to cope with an uncertain future, store large volumes of carbon, provide some timber income, and continue to deliver the joy of mountain biking or bird-watching in serene forest groves are keeping it a productive, resilient, vibrant forest filled with healthy trees. Our business has the skills and experience to assist you with this responsibility.

Section B: Project Overview

The Town of Northborough's objectives for the initiation of ecological silviculture and active forestry on their community forest lands and our approach to meeting these objectives:

- Initially, we propose a revision of your existing Forest Stewardship Management Plans to **Massachusetts Forest Climate Management Plans** through grant funding from the Department of Conservation and Recreation. This process begins with a review of Forester DiMaio's inventory data, stand stratification, and silvicultural recommendations. We integrate this data with a field assessment of the forest's resiliency and vulnerability to stress and its adaptive capacity to climate change impacts. The conversion to a Forest Climate Management Plan concludes with the integration of climate adaptation and mitigation actions and strategies into the management plan inclusive of revisions to the silvicultural practices, harvest engineering changes for each proposed harvest project, and the addition

of many non-extraction silvicultural actions that could prepare the forest for an uncertain climate future. We understand that this work was not included in the RFP from your offices. The Department of Conservation and Recreation is appropriating substantial Federal funds for a grant program for future climate adaptive silviculture work in forest ecosystems. Access to these funds requires a Massachusetts Forest Climate Management Plan. You would want to be eligible for application to these funds; these funds would help you meet all your stewardship goals. This work does not have to precede the projects defined in Section 3.1 and 3.2 of the RFP.

- **Technical Approach for Updating Forest Inventory When and If They are Required:** First we need to obtain the original inventory plot data and determine the standard error of the data. Once we know the variance between the plots, we can decide how many additional plots are necessary in each stand to correct data accuracy, or not, if the original data has a low variance. To convert the plan to a Massachusetts Forest Climate Plan additional data on forest health, resiliency, and species composition would be taken. When future inventory work is required, our process for the collection and analysis of data includes:
 - **Preparation and Analysis prior to Any Inventory Update Field Work:** Analyze detailed GIS maps adding pertinent MassGIS data layers including but not limited to BioMap2, NEHSP critical habitat and supporting landscape, soils, terrain, slope, DEP wetlands, DEP watershed protection zones.
 - **Inventory Design and Set-up:** Design an assessment strategy for full review of the condition of the forest resource with respect to insect infestations, disease condition, invasive plant infiltration, and exploitation, severe storm damage from ice wind, and snow using GIS maps and loaded into handheld GPS equipment. This systematic approach creates grid lines of 660 feet between transects.
- **Preparation and Oversight of a Timber Harvest:** We have been executing timber harvest projects for over forty years in the forests of Massachusetts. We have a full understanding of the necessary logistics for the successful completion of a legal, permitted harvest. We would comply with all the conditions outlined in your Request For Price Quotes through the lens of climate adaptive forestry. This would require additional engineering and contract specifications.

We assure you that when one walks through our closed-out harvest site , it will be in a condition acceptable to your community. Specific technical deliverables:

- **Pre-sale proposal for harvest sites:** Define the field site and prepare detailed riparian, wetland, and harvest engineering GIS mapping before marking timber and sale preparation. Collect data to determine value based upon estimation of actual merchantable crops. Prescribe site-specific ecological silviculture for the forest stands in the harvest area by referencing silvicultural guides, Forest Climate Management Plan and peer reviewed literature advocating for the climate adaptation and mitigation actions and practices. Deliver pre-sale proposal to Northborough Conservation Commission for review.
- **Prepare Harvest:** Upon approval of the harvest proposal by the Northborough Conservation Commission, select and designate individual trees to be harvested. Complete the Harvest Cutting Plan permitting process with the Commonwealth, strictly adhering to all environmental laws and ecological silviculture principals. Follow Best Management Practice and MGL Chapter 132 including field inspection with DCR foresters. Design and lay-out of harvest engineering schematic including all water resource crossings, if necessary, harvest access roads, and landing locations. Permanently mark access roads and crossing locations as mandated by MGL Chapter 32.
- **Market Timber Products:** Compute the estimated sale volumes and prepare a detailed prospectus for potential vendors of the timber products for sale. A sample prospectus and bid invitation are included with this proposal. The prospectus includes all relevant contracts and bidding parameters mandated by municipal bidding statutes. Deliver the prospectus to potential vendors and place the appropriate legal advertisement of the timber sale and showing in the media. Market the timber sale to the industry through a formal showing/auction of the harvest site to potential operators. Conduct a pre-site visit conference to explain contract expectations to potential project bidders.
- **Supervise the Timber-Harvesting Project:** We take the impacts of timber harvesting equipment on your forest seriously. We communicate our expectations clearly to the operator through a series of steps prior to their start-up. During the project we have a constant presence on the land working in alliance with the operator to protect the

net future value of the timber crops and the residual forest structure. Our approach include a site review with operator before project commencement in which we fully explain our expectations for compliance with all environmental laws, the Town's contract, and ecological silviculture principals. We continue our site visits twice or more weekly and after each one we complete a **Harvest Supervision Report** and provide copies to the operator, and Northborough Conservation Commission. We supervise the contract regarding engineering, payment, insurance requirements, and full compliance with **both** the required and suggested Best Management Practices in the 2014 Massachusetts BMP manual.

- **Supervise Harvest Project Clean-Up:** Manage post-harvest erosion control measures installation on all main hauling roads and sloping land. Retention of the road system is important for all future management operations and prevention of soil displacement ensures the protection of water quality. Our firm works closely with each operator to guarantee road systems are "put to bed" well and any soils displacement and loss of soil carbon is prevented.
- **Timber Harvest Reports to Northborough Conservation Commission:** Deliver the field inspection reports for each project to the Commission and a monthly report on project progress. Prepare a digital image journal of harvest progress attached to each inspection report.
- **Example of Sample Bidding Requirements for Timber Harvesting:** We have included our standard Harvest Bid Prospectus with this proposal. Additions would be made to this document to accommodate specific circumstances of each project and the objectives of the harvest. We usually invite operators that we have had a successful working relationship with in the past and whose businesses are solvent. We always reserve the right to reject all, and any bids made that through due diligence we determine the bidder, and the proposed business arrangement are not in the best fiduciary interest of the Town of Northborough.

Section C: Qualifications

Wigmore Forest Resource Management

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WFRM is a family-owned business operating in Massachusetts. A Massachusetts licensed forester supervises all forestry work and prepares and monitors timber harvests directly. Highly trained and experienced forestry technicians provide support for forest inventory, field mapping using GPS and GIS analysis, timber sale preparation, and boundary maintenance. We work with current mapping software, including ArcPro GIS, Forest Metrix and NEDS3 forest inventory and stand composition analysis software. We carefully integrate these technologies with our clients current operations.

WFRM currently manages over 15,000 acres of municipal forest ecosystems in Granville, Montgomery, South Deerfield, Rowe, Conway, Southwick, Holyoke, and West Springfield. Our services to these cities and towns covers forest ecosystem management planning, ecological silviculture, GPS and GIS mapping of the resources, timber inventory, timber harvest scheduling, timber harvest engineering and supervision, marketing of timber crops, species composition control, deed research, boundary delineation, and public relations. Our business advocates the innovative silvicultural techniques necessary for the maintenance of highly resilient, future climate adaptive forest which is ready to cope with our uncertain times. Research and collaboration with other professionals in the forest ecosystem management community provides new perspectives and the assistance of an innovative network for project completion. We are in full compliance with the insurance requirements of this Request For Price Quotes. Both principal owners of WFRM are licensed Massachusetts Foresters.

- **2013 to present:** Assistance to Town of West Springfield with the sale of a conservation restriction to the Department of Conservation and Recreation on their Bearhole watershed lands.
- **2005 to present:** Community outreach and education efforts for City of Westfield, Town of West Springfield, Town of Conway, Town of South Deerfield, and City of Holyoke for the edu-

cation of these communities about the benefits of ecological silviculture and climate-based forest practices for the health, vigor, and productivity of the current and future forests.

- **2016:** Mitigation of an anti-harvesting campaign against the City of Westfield for work on their Tekoa Watershed lands.
- **2020:** Community based outreach effort with the Towns of Rowe and Conway to define a set of goals and objectives for the completion of Forest Climate Management Plans on over 1,800 acres of community owned forest lands. Campaigns included virtual education and decision-making sessions to create a set of goals and a future vision for the future of their forests, to determination of acceptable climate adaptation and mitigation practices, and an explanation of the completed management plans.
- **2023:** The delivery of a community wide education seminar on the Forest Climate Management Plan for 570 acres of forest lands owned by the Shelburne Falls Fire District.

Key Personnel

- Mary K. Wigmore, Massachusetts Licensed Forester #250, 1601 West Road, Ashfield, Massachusetts, 01330, owner Wigmore Forest Resource Management, lead contact for the project.
- John Clarke, Massachusetts Licensed Professional Forester #357, 24 St. Mary's Drive Jefferson MA 01522 (508) 963-2070. Second primary on the field production services and local expert on markets and operators.
- Robert J. Wigmore, co-owner Wigmore Forest Resource Management, Massachusetts Licensed Forester #251.
- John W. LeBlanc, California Registered Professional Forester #2324 Data Analyst, Forest Growth and Yield Modeling and Harvest Scheduling. Planner. Subcontractor.
- Kurt P. Wigmore, GIS Technician and Forestry Technician, GPS data collection for wetland and riparian areas integration for permitting on Harvest Cutting Plan, GIS mapping and database compilation, inventory software management, and timber crop marking and estimation.

Firm's Financial Condition and Stability

We are available to discuss our solvency and financial statements with the Conservation Commission in person. We do not wish to share sensitive information about our firm's financial statement in a publicly accessed document such as this one. We are currently solvent and managing a strong business.

Section D: Project Schedule

We present a schedule that reflects starting the work upon the **Edmunds Hill Conservation Area** first. Given the political climate towards timber harvesting across the Commonwealth and the urban nature of your community, we must assume that we might meet resistance to the harvest proposal. We suggest that the Commission consider the climate adaptation and forest resilience building approach to these projects. We present the concept of the revision of your Forest Stewardship Management Plans to Massachusetts Forest Climate Management Plans with the understanding that this work does not necessarily need to be done first. The timing outlined in the schedule assumes a start-up on the Edmunds Hill Conservation Area proposed harvest site of 50 acres, but they would be identical in nature but **2.4 times greater in scope** for work upon the Mount Pisgah Conservation Area proposed harvest area of 120 acres.

Other considerations with the schedule include the extent and detail of the invasive plant infestations, necessity for permits for invasive control work in proximity of wetlands, timber market conditions, availability of the best operators for the work, and the reaction of your community to the proposed silviculture projects. Best laid plans are known to go astray when the unknown variable of a community's passion for their forested treasures becomes engaged. We feel confident that we can communicate the importance of this work to your forest and the benefits your community will derive, but it may take some time. This does not mean it would cost more, just that helping folks to understand new ideas requires patience with their integration of a new way of thinking about their beloved woods.

Finally, we prefer to bill our work on an hourly basis at the rate of \$60.00 per hour. We would deliver invoices with hourly billing rates. The pricing proposals in Section F of this proposal are based on hourly computations at this rate. We feel that our integrity and ethics are not compromised