

April 10, 2016

Submitted via email to: Jessica Rowcroft jessica.rowcroft@state.ma.us

Jessica Rowcroft, Project Manager
Massachusetts Department of Conservation and Recreation
251 Causeway Street, Suite 700
Boston, MA 02114

RE: Comments on Eight Proposed Forest Management Projects

Dear Ms. Rowcroft,

We are writing to comment on eight forest management projects that are being proposed by the Massachusetts Department of Conservation and Recreation (DCR) in seven state forests.¹ The projects include Brook Road (Wendell State Forest), Brookline Road (Townsend State Forest), Clam River Dam (Sandisfield State Forest), Heaphy-Richardson Lot (October Mountain State Forest), Sheep Ranch Rendezvous (H.O. Cook State Forest), Stonewall Lot (Oakham State Forest), Tannery Road (Savoy State Forest), and Townsend Home Fuel Wood (Townsend State Forest). The following comments apply to all of these projects.

We have a number of questions and concerns regarding the proposed projects. It is particularly important that analysis of these projects provide documentation that DCR has fully considered their potential impacts on climate change and on the Commonwealth of Massachusetts budget.

Climate Change and Forest Carbon Sequestration

Halting and reversing the increase of atmospheric carbon dioxide (CO₂) and other greenhouse gases (GHG) to address climate change is an unprecedented challenge. The Paris Agreement on climate change,² endorsed by the U.S. and almost 200 other countries, affirmed that it is critical to limit global temperature rise to well below a rise of 2 degrees Celsius beyond pre-industrial levels. Article 5 of the Agreement declares that to achieve this goal, “Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gasses...including forests.”

The importance of forest protection in mitigating climate disruption is increasingly recognized by the scientific community. For example, Woods Hole Research Center has noted that “even complete cessation of fossil fuel use by 2100 might not be enough to limit global warming to 2 degrees Celsius,” but that the proper management of tropical and temperate forests could “accumulate additional carbon, bringing the total accumulation to as much as 5 billion tons of carbon per year.”³

Recent research provides scientific evidence that the impacts of continued global warming may well be even worse and occur even sooner than previously thought. For example, a paper

¹ Department of Conservation and Recreation. 2016. DCR Announces Public Meetings for Forest Management Projects in H.O. Cook, October Mountain, Sandisfield, Savoy, Wendell, Oakham and Townsend State Forests. Commonwealth of Massachusetts

<http://www.mass.gov/eea/docs/dcr/news/public-meetings/materials/forestry/march2016-forestry.pdf>

² United Nations Framework Convention on Climate Change (UNFCCC). 2015. “Adoption of the Paris Agreement” <http://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf>

³ Richard A. Houghton and Alessandro Baccini. 2015. Forest Restoration: The Bridge to a Fossil- Fuel-Free Future. Woods Hole Research Center Policy Brief. May 2015 http://whrc.org/wp-content/uploads/2015/06/PB_Restoration.pdf

published by 19 leading climate experts concludes that, “we have a global emergency” because human-caused increases in atmospheric concentrations of carbon dioxide likely will melt ice sheets far more rapidly than previously anticipated. The melting would, within the near future, raise sea levels by several meters, arrest the North Atlantic Ocean circulation, and stimulate super storms.⁴ This research demonstrates the need to take immediate action to reduce atmospheric CO₂ and other greenhouse gasses (GHG).

Massachusetts has the potential to play a key role in U.S. efforts to address the climate crisis. Our state’s forests are high in biomass density and carbon storage capacity.⁵ About 13 percent of the land base is in state ownership. This offers our Commonwealth an outstanding opportunity to provide leadership in the protection and restoration of forests to help mitigate climate change.

The DCR took a positive step several years ago with the Forest Futures Visioning Process (FFVP). The FFVP was meant to take a fresh look at the agency’s forestry program and to help chart a new course for the management of state-owned forest lands.

DCR, with facilitation by the Massachusetts Office of Public Collaboration (MOPC), launched the FFVP in April 2009. The agency undertook this process at the suggestion of the DCR Stewardship Council, in response to public criticisms of some of DCR’s forestry practices and in recognition of the need to engage the public in an active dialogue about land management within the DCR State and Urban Parks system. Led by a Technical Steering Committee (TSC) composed of individuals with a high level of expertise on issues, trends, and best practices in climate change, forest conservation and ecology, invasive species, landscape ecology, natural resource economics and law, recreation, silviculture, social policy, visual/aesthetics, watersheds, and wildlife habitat, and guided by an Advisory Group of Stakeholders, the FFVP involved five public forums that were attended by over 500 individuals and received over 1,000 comments during the course of the process.

In its final recommendations report, the TSC encouraged DCR to embrace a “land management paradigm shift ... moving the Department’s forest management towards a vision based on a more comprehensive suite of ecosystem services.”...The TSC focused on the premise that DCR lands should be managed for the provision of ecosystem services to the public that are not consistently delivered by private lands. These services include: carbon sequestration....⁶

The 2008 Massachusetts Global Warming Solutions Act (GWSA) includes specific targets for reducing emissions of carbon dioxide and other greenhouse gases (GHG).⁷ The GWSA calls for

⁴ J. Hansen, M. Sato, P. Hearty, R. Ruedy, M. Kelley, V. Masson-Delmotte, G. Russell, G. Tselioudis, J. Cao, E. Rignot, I. Velicogna, B. Tormey, B. Donovan, E. Kandiano, K. von Schuckmann, P. Kharecha, A. N. Legrande, M. Bauer, and K-W Lo. 2016. Ice Melt, Sea Level Rise and Superstorms: Evidence from Paleoclimate Data, Climate Modeling, and Modern Observations that 2 °C Global Warming Could Be Dangerous, *Atmos. Chem. Phys.*, 16, 3761-3812, doi:10.5194/acp-16-3761-2016 <http://www.atmos-chem-phys.net/16/3761/2016/acp-16-3761-2016.html>

⁵ Daolan Zheng, Linda S. Heath, Mark J. Ducey, and Brett Butler. 2009. Relationships Between Major Ownerships, Forest Aboveground Biomass Distributions, and Landscape Dynamics in the New England Region of USA. *Environmental Management* Volume 45, Issue 2 , pp 377-386 <http://link.springer.com/article/10.1007%2Fs00267-009-9408-3>

⁶ Massachusetts Department of Conservation and Recreation. 2012. Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines (p. 1-2) <http://www.mass.gov/eea/docs/dcr/ld/management-guidelines.pdf>

⁷ Commonwealth of Massachusetts. Acts of 2008 Chapter 298. An Act Establishing the Global Warming Solutions Act. <https://malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter298>

the Massachusetts Department of Environmental Protection (DEP) to publish a state GHG emissions inventory, including both emission sources and carbon sinks. Moreover, the GWSA establishes statewide goals that will achieve a reduction of between 10% and 25% below statewide 1990 GHG emissions by 2020 and 80% below 1990 GHG emissions by 2050.

To date, Massachusetts policy makers and agency officials have not risen to these challenges. Although there is a broad global consensus that managing forests to maximize carbon sequestration is vital to mitigating disastrous climate disruption, state agencies have failed to take decisive action to address this issue. Instead of providing strong regulation of GHG emissions from forests, DEP has allowed DCR to continue a forest management program with no apparent requirement that it conduct an on-the-ground baseline carbon inventory, or that it ensure that its programs are helping to achieve GWSA GHG reduction goals. Despite the recommendations of the FFVP Technical Steering Committee and Advisory Group of Stakeholders, DCR has not made a “land paradigm shift.”

Instead, as indicated by the eight forest management projects currently proposed by DCR, the agency has fallen back into business as usual, cutting our state forests with no apparent regard or accountability for carbon sequestration or climate impacts. These projects provide considerable detail in describing available “stands” of timber, why they should be cut, and how the agency plans to cut them. However, none of them include any mention whatsoever of climate change or documentation of the net carbon impacts of the project. Only one of the projects, Brookline Road in Townsend State Forest, even mentions the word “carbon.” Unfortunately, this is in the context of undocumented claims that logging will provide “short term carbon sequestration” and will “build [forest] complexity” that will “sequester carbon.”⁸

The Regional Greenhouse Gas Initiative (RGGI), established by the Commonwealth of Massachusetts and eight other states, offers guidance that could be followed by DCR to assess how its forest management projects affect forest carbon. RGGI provides a number of useful requirements and methods for quantifying the net climate benefits of such projects.⁹

- Standing live carbon (carbon in all portions of living trees)
- Shrubs and herbaceous understory carbon
- Standing dead carbon (carbon in all portions of dead, standing trees)
- Lying dead wood carbon
- Litter and duff carbon (carbon in dead plant material)
- Soil carbon
- Carbon in in-use forest products
- Forest product carbon in landfills
- Biological emissions from site preparation activities
- Mobile combustion emissions from site preparation activities
- Stationary combustion emissions from ongoing project operation and maintenance
- Biological emissions from clearing of forestland outside the project area
- Biological emissions/removals from changes in harvesting on forestland outside the project area

⁸ Massachusetts Department of Conservation and Recreation. 2016. Forest Management Proposal: Brookline Road <http://www.mass.gov/eea/docs/dcr/stewardship/forestry/manage/forest-product/brookline-road.pdf>

⁹ Regional Greenhouse Gas Initiative. 2013. Offset Protocol U.S. Forest Projects http://www.rggi.org/docs/ProgramReview/FinalProgramReviewMaterials/Forest_Protocol_FINAL.pdf

- Combustion emissions from production, transportation, and disposal of forest products
- Biological emissions from decomposition of forest products

To date, RGGI guidelines have assumed that burning forest biomass for energy is “carbon neutral.” Recent science, such as the 2010 Manomet study, commissioned by the Commonwealth of Massachusetts¹⁰, has found that this is not the case. In fact, the Manomet study concluded that whole tree biomass burned as fuel results in greater net emissions of carbon dioxide than from fossil fuels. Consequently, prudent measurement of the carbon impacts of forest management activities should also include:

- Biological emissions from burning of forest biomass as waste or for energy

DCR has a duty, consistent with the Paris Agreement, the GWSA, and the recommendations of the FFVP, to begin fully and seriously addressing the carbon and climate impacts of forest management. Toward that end, we request that, before DCR starts any on-the-ground activities for the eight forest management projects being considered, the agency:

- describe how DCR plans to measure each of the RGGI factors listed above — as well as emissions from burning of forest biomass — before the project is begun, and how it will provide follow-up measurements after the project is completed;
- supply numerical data for each of these factors;
- explain how each project conforms with the mandate of the GWSA to collaborate with the DEP to monitor and regulate emissions of GHGs with the goal of reducing those emissions;
- provide estimates of the expected net carbon emission and sequestration impacts of these projects by 2020 and 2050;
- if the proposed project does not maximize the amount of stored forest carbon, fully and transparently explain why DCR has concluded that the benefits from not doing so outweigh the costs; and
- offer an opportunity for public review and comment on these findings.

The days are past when forest management projects could be planned and executed by DCR with no regard for the global climate. We now know that forest management decisions made today will have climate implications for many decades to come. DCR has the chance to leave a priceless legacy to future generations by protecting our precious state forests and their vital capability to mitigate climate disruption.

Costs versus Benefits of Proposed Projects

In January 2016, Governor Charlie Baker announced that, due to a projected shortfall, he is cutting the Massachusetts state budget mid-fiscal year by \$49 million. This includes freezing

¹⁰ Manomet Center for Conservation Sciences. 2010. Massachusetts Biomass Sustainability and Carbon Policy Study: Report to the Commonwealth of Massachusetts Department of Energy Resources. Thomas Walker (Ed.). Contributors: Peter Cardellicchio, Andrea Colnes, John Gunn, Brian Kittler, Robert Perschel, Christopher Recchia, C., David Saah, and Thomas Walker. Natural Capital Initiative Report NCI-2010- 03. Brunswick, Maine <http://www.mass.gov/eea/docs/doer/renewables/biomass/manomet-biomass-report-full-lorez.pdf>

hiring for a number of state jobs, reducing grants to hospitals and community health centers, and canceling planned clean water programs.¹¹

In light of current budget realities, it is more critical than ever for our state government funds to be spent in a fiscally sound and sustainable manner. This includes DCR's forest management program.

For each of the eight planned forest management projects noted above, we request that DCR provide dollar figures for each of the line items listed below.

Projected costs:

- Forester salaries and benefits
- Contract and/or seasonal forester salaries
- Vehicle operation and maintenance
- Supplies and equipment
- Related Bureau of Forestry office operating costs
- Boundary surveying
- Road building and maintenance
- Mitigation of invasive species, water quality degradation, soil erosion, etc.

Projected revenue:

- Revenue from sale of trees cut
- Other sources of revenue
- Projected net costs versus revenue over life of project

If the costs of an individual project are projected to exceed revenues for the sale of trees cut, we request that DCR explain how the net benefits to the public justify such a loss to taxpayers. Such an analysis must include other public programs and services forgone in order to implement the forest management project. If it is claimed that there are broader economic benefits to society, such as increased carbon storage to mitigate climate change, then these benefits need to be specifically documented.

Thank you in advance for the opportunity to comment on these eight forest management projects. We stress that it is important that the information requested be fully documented and publicly available for review before any decisions are made regarding the implementation of these projects. Therefore, we look forward to your timely response.

Sincerely,

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¹¹ David Scharfenberg. 2016. Governor Charlie Baker Shaves \$49m Off Budget. The Boston Globe <https://www.bostonglobe.com/metro/2016/01/08/baker-cuts-million-from-state-budget/acEhrS3RKBzThD1T7pkwBJ/story.html>

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