

GREENFIELD RECORDER

We need more forest management

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Forestry is the profession of managing forests in a sustainable manner to meet the goals of landowners. Foresters develop forest management plans and carry them out with silvicultural prescriptions. Silviculture is the art and science of producing and tending a forest. It includes controlling the establishment, growth, composition, health, and quality of forests to meet the diverse needs and values of landowners and society on a sustainable basis. As a consulting forester in my own business, I help private landowners protect and manage thousands of acres across Massachusetts.

The U.S. Forest Service produces Forestry Inventory Reports which shows how forests are doing in every state. I examined the Massachusetts Forest Inventory Reports which list annual net forest growth, annual forest mortality, and the annual timber harvest. I converted the cubic feet in the report to board footage (which includes cordwood : 2 cords equal 1,000 board feet).

From 2006 to 2019, annual net forest growth has declined significantly from an average of 1.8 billion board feet per year to 1.0 billion board feet per year while forest mortality has almost doubled from .55 billion board feet per year to almost 1.0 billion board feet per year. In that same time period, timber harvesting has dropped by 60% from .7 billion board feet per year to .3 billion board feet per year.

So as timber harvesting has decreased, forest mortality has greatly increased. The last few years have seen very significant declines in annual net growth which in large part may be attributable to increased tree mortality and tree decline from defoliations by the gypsy moth caterpillar and other insects as well as tree diseases, storm damage, and one of the most important reasons — overcrowding. The trend line of the Forestry Inventory Reports shows that our forests are in significant decline.

Thus, we see that as timber harvesting has greatly decreased, forest mortality has greatly increased while carbon emissions from our forests have risen to 3 million tons/year. These emissions are equivalent to adding 550,000 cars to our roads. Diseased trees are also a significant source of methane emissions according to a study by researchers at the Yale School of Forestry. Estimated methane emission rate from unmanaged upland forests are equivalent to burning 16 gallons of gas/acre/year. Because we have at least two million acres of under-managed or mismanaged forest land this equals the burning of at least 32 million gallons of gas every year because of the lack of forest management.

This is not consistent nor does it support the Massachusetts Global Warming Solutions Act which requires CO₂ and other greenhouse gas emissions be cut by 80% by the year 2050. Forests in Massachusetts sequester 15% of the state's annual carbon emissions annually but with good forest management we could increase that to 20% or more while greatly reducing our use of imported fossil fuels and other forest products and increasing the value of our forests by at least \$100 million/year. Increasing forest management would provide for a more diverse forest that is less susceptible to severe tree mortality from insect pests and tree diseases and would limit the impact on water quality from catastrophic storms by providing for a more diverse age structure. Increasing

forest management would provide for more diverse wildlife habitat especially early successional forest which some wildlife species depend on.

Increasing forest management would also provide forest products we all use such as sawlogs for regional sawmills, hardwood cordwood for local firewood businesses, pulpwood for mulch and regional paper mills, wood chips for regional and local biomass heat and power systems, and wood chips for a regional wood pellet manufacturer.

About 20,000 jobs in Massachusetts are sustained by the forest economy. These jobs are in forestry, timber harvesting, forest industries, and wood using industries as well as recreational uses.

In January, I will be filing a bill in the Massachusetts Legislature on behalf of Massachusetts landowners. It is called a New Forestry Deal for Massachusetts Landowners and would at least double the number of jobs in the forest economy. It will encourage the practice of forestry by creating more incentives for landowners to protect their forest, have a Forest Management Plan; and encourage them to manage their forest and support low grade biomass markets to reduce our use of fossil fuels. Support more forest management and a New Forestry Deal for Massachusetts landowners.

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