Report: Mass. forests may face 18 percent decline

By Steve LeBlanc
Associated Press / April 6, 2012

BOSTON—Massachusetts has enough forest cover to absorb a million homes worth of carbon emissions each year, but that natural scrubbing effect could diminish over time if current development trends continue.

That's according to a study by researchers at Harvard University and the Smithsonian Institution who have looked at more than a quarter century of data on the capacity of Massachusetts forests to breathe in and store the heat-trapping greenhouse gas.

The data includes measuring the diameters of thousands of trees every five years to gauge their growth and monitoring carbon levels with the help of soaring towers that poke up through the leafy canopy of the state's forests.

The study found that if the state continues its existing pattern of cutting down trees to make way for homes and businesses over the next half century, the ability of Massachusetts' forests to absorb carbon could fall by up to 18 percent.

"There's a million homes worth of energy that trees are eating for us," said Jonathan Thompson, a research ecologist at the Smithsonian Conservation Biology Institute working with Harvard Forest, Harvard University's laboratory for ecological research.

"There are all these technologies for reducing carbon and here we have trees that are just doing it for us," Thompson added. "It's a cheap way and really effective way to deal with climate change."

Thompson said researchers were aided in part by Massachusetts' penchant for regulations -- including the regulation that requires anyone who wants to harvest timber to get a state permit first. That's allowed researchers to build a database that Thompson said doesn't exist in any other state.

Add to that the cataloging of the growth of trees and the use of the so-called "flux towers" that allow researchers to compare carbon levels at the top of the tree canopy with levels at ground level to see
how much carbon dioxide is being absorbed. Investigators are able to accurately measure how much of the gas the forests are storing.

About 70 percent of land in Massachusetts is forested -- but that hasn't always been the case.

After European settlers began arriving, large swaths of forest land were cut down to make way for farms. Then, as the industrial revolution took hold much of that farm land was abandoned and forests began to grow again.

That means a significant portion of forest land in Massachusetts is between 80 and 120 years old -- still in the "puberty" stage for trees, when they are growing quickly and taking in more carbon than they might when the trees transition to old growth forest.

"They are really socking away the carbon," Thompson said. "This won't go on forever."

Bob Perschel, executive director of the New England Forestry Foundation is hoping to preserve as much of the state's forested land as possible.

The nonprofit group works with private owners who want to protect their land from future development. Perschel said the group already owns and helps manage about 137 parcels of forest land across New England.

While Massachusetts offers tax credits of up to $50,000 for owners of forest land who donate their property, it's hard to compete with developers willing to offer millions, Perschel said.

"It seems like a really good investment to help these land owners keep their forests and keep that carbon sequestered," he said.

And while the recession has helped slow the drive to develop, Perschel expects the impulse will return as the economy brightens.

Once that happens, he said, the state's loss of forest cover could pick up again, one tree at a time.

"We're showing a decline in our forest base and that's exactly not what we want to be doing at this point," Perschel said, "After 100 years of growth and increasing forests, we're now beginning to tilt down."

From: http://www.boston.com/news/local/massachusetts/articles/2012/04/06/report_mass_forests_may_face_18_percent_decline/