New study looks at selling carbon offsets in Vermont

Vermont’s forests are full of significance. They are spaces for work, play, and reflection; they reward careful stewardship with food for our tables, wood for building and heating our homes, and in spring, sweet maple syrup.

Sometimes harder to see, but no less real, are benefits like clean water and air, connected habitat, and protection from increasingly severe storms. And, Vermont’s forests sit at the center of the Great Northern Forest, which stretches from the Upper Midwest to the Canadian Maritimes. It is one of the most ecologically intact temperate broadleaf forests in the world.

Forestland owners, and the foresters and loggers they work with, face complex choices as they try to safeguard all the forest has
to offer in an economically viable way. That’s why—with the backing of the High Meadows Fund and the Vermont Housing & Conservation Board—VLT commissioned a study on whether Vermonters could incorporate the sale of carbon offsets in their forest management plans.

We were happy to learn that managing woodland with carbon in mind can work with sustainable forestry. “No one had done an in-depth study on the feasibility of a statewide forest carbon program to enhance conservation and forest stewardship” explains Nick Richardson, VLT president. “We’ve learned there is potential for landowners to be paid more for doing what they already do: managing forests exceptionally well.”

HOW COULD FOREST CARBON OFFSETS WORK IN VERMONT?

The northern forest stores an immense amount of carbon, reducing the pollution that contributes to climate change. In fact, Vermont’s forests capture about half of the carbon emitted by Vermonter.

In response to concerns about the climate, a market approach to reducing airborne carbon has gained ground. Those looking to lessen the impact of the pollution they create can buy a carbon offset. People who sell offsets must prove their practices are keeping carbon dioxide out of the atmosphere. Reducing pollution, expanding renewable energy, and storing carbon through land management practices are all possible carbon-offset projects.

The new study, by UVM’s Carbon Dynamics Laboratory and carbon consultant, Spatial Informatics Group, found that the high up-front cost is the biggest challenge for Vermont landowners wanting to participate in carbon offset projects. Vermont’s forest parcels are mostly small and family owned; until recently, these projects only made sense for those with more than 1,500 acres.

“One of the most significant findings is that it is now possible to group forest properties together so that the administrative costs can be shared,” explains Nick. The study estimated that forest owners can net $16 per acre per year over the first 10 years of a project. “At the right scale, this could supplement other forest income and help support continued good forest stewardship.”

Vermont seems well-suited to a strategy that requires cooperation. “In Vermont there's a strong ethic to do good things on the land,” says Robert Turner, who lives in Vermont, but works nationwide verifying the integrity of carbon projects. “We have many examples of landowners who work together to meet common goals, such as protecting wildlife habitat. This doesn’t happen everywhere.”

In the northern Green Mountains, Nancy Patch is one of those forestland owners. Nancy, a county forester and former VLT board member, owns 200 acres of conserved forest with her husband, Kevin, a logger.

“My mission in life is to protect this northern forest,” explains Nancy. “To keep this place for the future. To keep it healthy.” That's why she is active in Cold Hollow to Canada, a group of forestland owners who coordinate management for forest health and wildlife.

“Most forestland owners in Vermont don't own land for income,” says Nancy. “They own land because they want a piece of heaven—privacy, recreation, a place to enjoy. There are great pressures because of development, but by bringing in additional income through carbon offsets, people will be better able to keep their land.”

WHAT ARE THE IMPLICATIONS FOR FOREST MANAGEMENT?

In Vermont, around 80% of the forest is privately owned. Of this land, almost 420,000 acres, or 12%, is conserved with VLT; most is enrolled in Current Use as working forest and sugarbush. Offsetting carbon can complement timber management and be compatible with Current Use.
“Participating in carbon offsets doesn’t have to mean a significant reduction in timber harvesting,” explains forest scientist Bill Keeton, lead author of the report and a VLT board member. “It is compatible with good forest stewardship practices already in use.”

A healthy, diverse, well-stocked forest is an ideal candidate. Sugarbushes are usually a good fit because there are many large trees. Tree species of varying ages are also desirable because young, fast-growing trees quickly store carbon in their new wood, while older trees store a lot of carbon because of their mass and large root system.

After landowners sign on to an offset program, they must show that the size, density, and number of trees has increased, as verified by a third-party consultant.

The study also found that environmental benefits, such as wildlife habitat, water quality, and flood resilience are compatible with, and would benefit from, managing for carbon. These related environmental benefits can even increase the price paid for offsets. “[Some buyers] like carbon offsets that tell a story and offer other benefits,” explains Bill. “The strength of the study is that we mapped and defined those benefits well.”

**WHAT HAPPENS NOW?**

The study was a first step. VLT is now exploring what role it can play in aggregating forestland for participation in carbon offset programs. “We want to move beyond the research to get something done on the ground,” explains Nick. “We feel a responsibility to these woods and to their well-being.”

Over 150 years ago, Vermont was mostly deforested. Recently, the forest has begun to decline again, a trend related entirely to subdivision and rural sprawl. VLT wants to do what it can to protect what was restored. VLT’s conservation easements promote good forest stewardship and support biodiversity, wildlife, water quality, and flood resiliency. The study found these values go hand-in-hand with managing for carbon.

VLT plans to begin a demonstration project later this year. “It’s hard to say what the impacts of climate change will be here,” says Nick. “But I am sure that 50 years from now, Vermonters will be glad to live surrounded by a healthy forest. It’s what inspires us all to keep trying new things, finding new ways to work toward this goal.”

In the meantime, Nancy encourages anyone who owns forestland to consider carbon storage. “People can manage for carbon anytime,” she says. “Managing forests with more and larger trees is a benefit to us all.”

Read the full report, [Vermont Forest Carbon: a market opportunity for forestland owners](https://www.vlt.org/carbon/)

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