

SELLING CARBON OFFSETS:

A Potential Source of Funding For Forest Conservation

New sources of funding for land conservation are needed as land trusts grapple with the loss of public acquisition dollars and worry about having picked all of the low-hanging land and easement donations. Land trusts are thinking more broadly in terms of partners and innovative methods to protect open space in the 21st century. The burgeoning carbon offsets market for forest projects, while sometimes complicated and potentially risky, offers much for land trusts looking for new opportunities to conserve land.

Normally the presence or absence of development rights fuels the financial engine of land conservation, not the intrinsic value of the natural resource being protected. The fact that in the carbon offsets market intact forests may have a commercial market value such that a landowner could derive an ongoing income for *growing* trees rather than cutting them is starting to catch people's attention.

In these very early stages of a functioning carbon offsets market for forest projects, several land trusts have had success with registering forest projects, selling offsets and receiving a significant financial return for their pioneering efforts. Others are finding the process daunting, expensive or are waiting on the sidelines before wading in. Here's a general overview of what you need to know, with links to more specific information.

Trees Should Get More Credit

Forests are the most effective, expandable ecosystems on earth at removing carbon

dioxide (CO₂) from the atmosphere and storing it as carbon safely for the long term. When forests accumulate and hold carbon, they act as carbon "sinks" and help lower emissions overall. When forests are disturbed by logging or conversion, they release carbon and add to greenhouse gas emissions (GHG) overall.¹

It is intriguing to think that a commercial market would place a dollar value on forests for what they do naturally. Just such a marketplace is starting to take shape in California. Big emitters of CO₂ such as Chevron and Pacific Gas & Electric, pushed by pioneering climate legislation with stringent penalties for noncompliance, have come around to paying large forest landowners for allowing their trees to do what they do best: sequester CO₂.

Land trusts, some of which have been conserving forests for more than 100 years, will no doubt want to partake in a market that encourages forest conservation, reduces GHG emissions and potentially earns an income



At a workshop at the Harvard Forest in Massachusetts led by Ecotrust staff, foresters discuss baseline and inventory requirements for registering forest carbon projects.

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stream for the forest landowner. As with any groundbreaking new venture, however, there are risks that land trusts should be aware of before making a recommendation to a landowner or offering up a land trust's own precious conservation lands to the rapidly evolving market of carbon offsets.

How Do Carbon Offsets Markets Work? Voluntary

There are two major categories of carbon markets: voluntary and mandated cap-and-trade. Voluntary markets were the first to become available as the cap-and-trade regulated markets were being developed.

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The California voluntary carbon market, which has been in existence since 2003, allows businesses and individuals wishing to offset their carbon footprint to voluntarily buy carbon offsets. Governor Arnold Schwarzenegger and Congresswoman Nancy Pelosi were early purchasers who set a good example.

Although the sale of carbon offsets on the voluntary market can derive some remunerative benefit for the forest landowner, the price per metric ton is lower² than for "compliance" offsets—those mandated by the cap-and-trade regulations discussed below. While voluntary offsets markets are still functioning, now that compliance offsets have come into fruition,³ from a revenue standpoint it makes more sense to attempt to register a forest project with the more lucrative compliance offsets market.

Pacific Forest Trust (PFT), based in San Francisco, a leader in developing policies for GHG reductions through forest conservation and sustainable management, was an early participant in the California carbon offsets

CARBON DIOXIDE is one of six primary categories of greenhouse gases in the Earth's atmosphere. **A CARBON OFFSET**, or carbon credit, is a financial unit of measurement that represents the removal of one ton of carbon dioxide equivalent from the atmosphere.

¹ Pacific Forest Trust (<https://pacificforest.org/Forest-Carbon-Projects.html>). NB: Carbon remains sequestered in stable wood products such as flooring or furniture.

² As of December 2013, the price per metric ton on the voluntary market is less than \$2; the price per metric ton on the California Air Resources Board compliance market is \$10-\$12 (Climate Action Reserve).

³ The first compliance carbon offsets for forests were issued in November 2013 (Climate Action Reserve). See the Downeast Lakes Land Trust example in this article.

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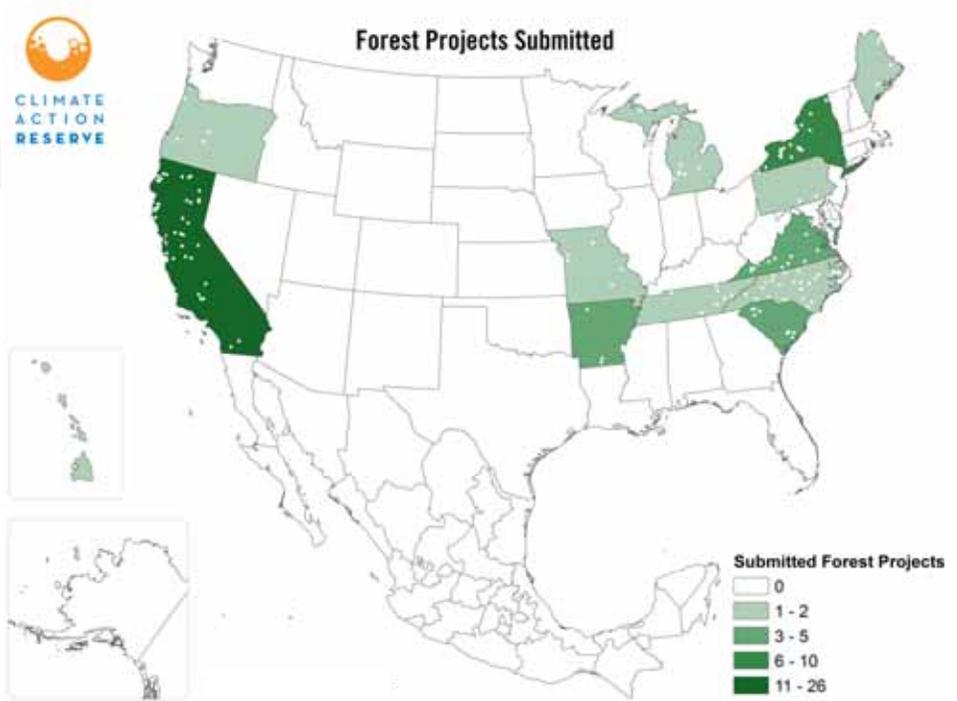
market. In 2002, PFT began managing 2,200 acres of redwood forest in Humboldt County, California, owned by the Van Eck Forest Foundation. PFT knew that participating in the carbon offsets market was synergistic with their long-term forest management goals.

The Van Eck Forest Project became the first forest project registered under California's voluntary offsets market. In addition to protecting significant habitat and restoring a native redwood ecosystem, the emissions reductions generated by the project represent the equivalent of taking 123,000 cars off the road for a year. From 2005 to 2009, the Van Eck Forest Project earned \$2 million from the sale of carbon offsets. This revenue more than covered all project development and operating expenses, as well as returning substantial income to the landowner.

Laurie Wayburn, PFT's president and co-founder, remarks, "Having led the development of the policy and protocols enabling forest carbon offsets, we wanted to illustrate how these projects were done, what they cost and what the potential pitfalls were. Participating in the carbon offsets market is entirely consonant with what we normally do in terms of management plans, inventorying timber, monitoring growth and sustainable timber harvest. As the first project, a lot of learning was done on the Van Eck. It really showed us the compatibility of long-term conservation management and ecosystem services markets. It particularly shows how we can reverse the loss of forest carbon—which is the second largest source of CO₂ globally."

PFT is in the midst of transitioning the Van Eck Forest Project to a compliance offsets project. The result will mean that future sales of carbon offsets from the Van Eck Forest will yield better prices. PFT has subsequently

ACCORDING TO CLIMATE ACTION RESERVE, a nonprofit offsets project registry founded in 2001, land trusts involved in carbon offsets forest projects include: Audubon Society, The Conservation Fund, Downeast Lakes Land Trust, New England Forestry Foundation, Pacific Forest Trust, Placer Land Trust, Redwood Forest Foundation, Sempervirens Fund and The Nature Conservancy.



Climate Action Reserve's map of the United States shows the location of forest projects submitted for registration as of September 5, 2013.

helped landowners and land trusts across the United States develop and register offsets projects for the California market.

Mandatory

Although Congress has not passed cap-and-trade legislation, the Environmental Protection Agency has taken steps to reduce GHG emissions from motor vehicles. The absence of a federal program has left a vacuum for the states to fill. In 2006, California, the 15th largest emitter of GHG worldwide, passed the Global Warming Solutions Act (AB32) that established a goal of reducing the state's GHG emissions to 1990 levels by 2020. The California Air Resources Board (ARB), the lead agency responsible for implementing AB32, was given explicit authority to develop market-based programs. After extensive stakeholder input,

ARB developed what is today known as the California cap-and-trade program.

The California cap-and-trade program creates an economic incentive to reduce emissions by placing an absolute cap on the amount of GHG that can be emitted by a regulated entity.⁴ If a regulated entity exceeds its emission allowances, it must purchase more allowances or trade with other regulated entities.

In turn, the need for regulated entities to account for their emissions creates the market demand for carbon offsets. Regulated entities need to buy carbon offsets; forest landowners have carbon offsets to sell depending on the size of the forest and its ability to store carbon. To help create a supply to meet the demand for offsets, AB32 allows regulated entities that are emitting in California to purchase carbon offsets generated from projects located anywhere in the United States, except Alaska. This means that forest landowners across the country can potentially sell carbon offsets on the California regulated market, currently the largest carbon market in the world that allows managed forests to generate offsets credits.⁵

Pacific Forest Trust: <https://pacificforest.org/Forest-Carbon-Projects.html>
 Air Resources Board: www.arb.ca.gov
 Climate Action Reserve: www.climateactionreserve.org
 Ecotrust: www.ecotrust.org/forests
 Finite Carbon: www.finitecarbon.com

How Land Trusts Are Getting Involved

Several land trusts that own large tracts of forestland⁶ have either started the process or successfully registered a forest project.

Most of the forest projects involve large conifers such as Douglas fir or redwoods. Placer Land Trust (PLT) of Auburn, California, has the distinction of being the first to attempt to register an oak woodland forest. PLT's 1,773-acre Harvego Bear River Preserve is one of the largest intact oak woodland forests in the Sierra foothills. PLT began the registration process for the voluntary carbon offsets market in 2010 and is still working on it. PLT received a grant from the Natural Resources Conservation Service's Conservation Innovation Grant Program to hire a licensed forester to conduct the inventory, matched by their own staff time.

When it came time to create the 100-year carbon modeling that is needed to spin off financial projections for carbon offsets, PLT's forester ran into trouble. There is a lack of data for growth rates and decay rates for western oaks because they are not as well studied as fast-growing commercial tree species. Another issue is that there is a conservation easement on the property. Easements must be within a year of the project start date—either before or after—which limits the time window for project development. That is not to say that a forest with an existing easement is ineligible. A forest carbon project could still work if the landowner agreed to tighten the restrictions in the easement to limit timber harvests and increase overall carbon stocks.

Jessica Daugherty, assistant director, is sanguine about PLT's experience thus far. "This project has focused attention on the importance of oak woodlands, a dominant landscape in California, as potential carbon sinks and the need to expand the forest protocols to include oak woodlands. Even if we don't get this project registered through this process, we have succeeded in enhancing the overall management of the forest and raising awareness about our work. We have also seen an increase in our standing within the region because of the innovative nature of trying to raise management funds by selling carbon offsets."

Not all the action is happening in California. Downeast Lakes Land Trust (DLLT) of Grand Lake Stream, Maine, is the owner of Farm Cove Project, one of only two forest carbon offsets projects included in ARB's inaugural listing of compliance offsets projects. Proceeds from the sale of these compliance offsets, expected to generate over \$2 million, will help finance the planned purchase of adjacent forestland.

Being one of the first forest projects to qualify for compliance offsets meant that DLLT had to be persistent. "The processes were literally being created by ARB as we went through them," says Mark Berry, executive director of DLLT. "It should be much easier now. We had a great partner in Finite Carbon who helped us through the registration process and is now helping us with carbon offsets marketing and sales."

Benefits and Risks to Landowners

One of the major unknowns is what will happen to the price of carbon over the long

term. Many expect the price to climb in 2015 as more entities come under ARB's regulations and are required to offset their emissions. Landowners are entering into 100+ year contracts for which they will have ongoing expenses of verification. For land trusts, with their perpetual commitment, this is not a problem, but it is worth considering carefully. It is impossible to predict whether future carbon offsets sales will cover these costs. It may be difficult to sell a property encumbered with such a contract if the price of carbon is not enough to cover the costs. It seems prudent for sellers of carbon offsets to retain a portion of their income to serve as an endowment to cover the long-term costs of monitoring, similar to the funds set aside for conservation easement monitoring.

In addition to costs, both upfront and ongoing, one should consider whether the long-term management goals for the forest are consistent with the requirement to create a net carbon sink. Tying a forest's management to the requirements of the carbon offsets market means committing to maintaining those gains for a very long time.

The Land Trust Alliance offers webinars and workshops at Rally for those wanting to learn more about carbon offsets markets and how to register a project. The websites of the project developers mentioned above are a wealth of information as are the websites for Climate Action Reserve and the California Air Resources Board. 

ELIZABETH WROBLICKA PRACTICES LAND CONSERVATION LAW IN MASSACHUSETTS AND CALIFORNIA. SHE THANKS PEER REVIEWERS KEITH ROSS OF LANDVEST AND LAURIE WAYBURN OF PACIFIC FOREST TRUST.

Go to www.lta.org/savingland to read the full version of this article, which includes a section on how to develop forest projects for registration.

⁴ In 2013, regulated entities included electric generating utilities, electricity importers and large industrial facilities. In 2015, fuel distributors will be added.

⁵ www.ecotrust.org/forests

⁶ Experienced project developers suggest 1,000-3,000 acres are needed as the minimum acreage for a feasible forest project, depending on the type of trees and their ability to store carbon.