Seeley Swan
PATHFINDER

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Eye on the Environment

Cash for Carbon: A New Market for Rural Landowners

By Melanie Parker

If you are a land owner in the Seeley, Swan, or Blackfoot regions you might want to start listening to the national and international discussions about carbon. Why? Because good land management practices, and/or innovative uses of local energy can literally pay cold hard cash.

I, myself, have been slow to see the connection between the larger discussions about climate change and my own life and work here in the Swan Valley, but over Christmas I had the great fortune of spending time with a family member working with carbon markets in rural North Carolina.

My oldest niece, Heather, is currently helping hog farmers develop and market 'carbon offsets' from improving waste management on the farm and, in some cases, burning methane as a domestic source of energy. The more we talked, the more I came to realize that we here in our corner of western Montana need to start doing some homework and paying attention to the emerging markets for carbon.

Forests and grasslands sequester carbon by 'fixing' carbon dioxide from the atmosphere. Forests also produce woody biomass that can be made into timber products and/or burned as fuel. These activities can have the effect of reducing carbon emissions from natural wildfire and replacing the burning of non-renewable fossil fuels.

People are increasingly willing to pay for these and other benefits that forest and grassland management provide. In fact, payments for so called 'ecosystem services' are on the rise.

Along with markets for water and wildlife, carbon markets have exploded in the past several years. International agreements like the Kyoto Protocol and the Copenhagen Accord, along with the anticipation that the U.S. will pass legislation to cap the emissions of greenhouse gasses have encouraged the market expansion.

The trade in carbon offsets alone doubled between 2006 and 2007, and again between 2007 and 2008 to a total of $705 million. The worldwide market in carbon already tops $64 billion.

How are people accessing these markets? One example I found here in Montana was a project that aggregated ranch lands totaling over 70,000 acres and secured contracts with those ranchers to conduct rotational grazing schemes that maximize carbon sequestration, and then sold the

resulting carbon offset on the Chicago Climate Exchange (CCX).

The CCX is a voluntary marketplace where businesses wishing to ameliorate their own activities on the environment can pay for carbon offsets. Most of the land owners who have sold carbon offsets in Montana have done so on the Chicago Climate Exchange, but there are several other exchanges operating as well as many examples of simple 'over the counter' transactions between paired individuals. Buyers of carbon offset credits include electric utilities, oil and gas companies, auto manufacturers and other energy-intensive industries.

The main issue for those of us who are small land owners is that there are certain costs associated with developing and monitoring a carbon offset project that make it pretty unlikely that any of us would invest the time or energy to access this market. However, I was encouraged to see how many examples are emerging where regional cooperatives are pulling together 10, 20, 50 smaller land owners into a pool for a carbon offset project.

The Northern Forest Center in the New England states and the Oregon Small Woodland Owners Association have both spawned particularly notable efforts to help small landowners band together to access carbon markets.

The kinds of forest related projects that may qualify as carbon offsets include preventing deforestation, reforesting land, improving stocking levels within forest stands, and growing trees for biomass energy. The criteria for what kinds of forestry projects count as carbon offsets vary among the voluntary exchange systems.

There are approximately 17 different standards available. The most utilized standards are the Voluntary Carbon Standard, the Climate Action Reserve, and the American Carbon Registry Standard.

What is a Forest Offset?
Carbon offsets are created by projects that reduce greenhouse gas (GHG) emissions, and may include activities ranging from capturing landfill methane to renewable energy projects. Within the forest offset category, activities to reduce GHG emissions include:

Afforestation: Carbon sequestration through the creation of forests on land that was previously unforested, typically for longer than a generation.

Reforestation: Carbon sequestration through restoration of forests on land that was once forested.

Active forest management: Carbon sequestration through particular forest management practices. If a forest is being harvested, wood products may provide sequestration value.

Reduced Emissions from Deforestation and Degradation (REDD): Avoided carbon emissions via conservation of existing carbon stocks (i.e. avoided deforestation).

What would such an offset be worth? Carbon offsets are selling for anywhere between $2 and $15 per ton of carbon equivalent. One paper I read cited the scenario of a 10 acre parcel of land in western Oregon where the carbon offsets would sell for just over $5,000. I'm uncertain of the value of a forest offset in our part of the world but it seems like it could be a significant number for many land owners especially if combined with other kinds of payments for ecosystem services.

Looking ahead into 2010, it looks like congress will pass some sort of climate change legislation capping carbon emissions. The American Clean Energy and Security Act (ACES) passed the House last summer. ACES requires electric utilities, oil refiners, natural gas producers, and some manufacturers to reduce their green house gas emissions to 17% below 2005 levels by 2020 and 83% by 2050.

The bill allows for up to 2 billion tons of offsets per year. The bill now moves to the Senate where a new Forest Carbon Incentives Program is being discussed that would offer a per acre payment to small forest owners for certain carbon sequestration activities. So it is likely that both market opportunities and direct payments may be increased in the near future.

While I don't think carbon offsets alone will alleviate the tremendous economic stress that private ranch and forestland owners are under, I do think that these and other 'payments for ecosystem services' are important.

I read about a few places like Chesapeake Bay and the Willamette Valley, Oregon where watershed groups are working to bundle payments for multiple ecosystem services including water, carbon, fisheries and wildlife and deliver one single payment to small land owners.

After reflecting on this whole topic a bit, I think that there is great potential across our three valleys to aggregate smaller landowners into some sort of cooperative group that can market carbon offsets and other ecosystem services to Montana businesses and institutions. While small private land owners that have a strong land stewardship ethic have long provided environmental benefits far beyond the fence line, perhaps now those benefits can be valued and compensated.

Thanks for caring and Happy New Year!

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RESOURCES CONSULTED

Papers

Brooke, Becca et al. 2009. Payments for Forest Carbon: Opportunities and Challenges for Small Forest Owners. Northern Forest Center, Manomet Center for Conservation Sciences, and Coastal Enterprises Inc. www.northernforest.org/downloads/Payments-for-Forest-Carbon-2009%20(4.1MB).pdf

Aggregation of Forest Carbon Offsets: Issues and Opportunities for the West. 2008. Western Forest Leadership Coalition Issue Brief. www.wflccenter.org/news_pdf/286_pdf.

Diaz, David D., Charnley, Susan, Gosnell, Hannah. December 2009. Engaging Western Landowners in Climate Change Mitigation: A Guide to Carbon-Oriented Forest and Range Management and Carbon Market Opportunities. USDA Forest Service, Pacific Northwest Research Station. PNW-GTR-801.

Climate Change Issue Paper. 2009. Rural Voices for Conservation Coalition. www.sustainablenorthwest.org/resources/rvcc-issue-papers

Henri, Carolyn J. 2000. **Carbon Offset Projects - Opportunities for Landowners. Oregon Small Woodlands Association. www.ccffa-oswa.org/Henri.html**

Websites

For information on the Montana ranchland project: http://www.clearskyclimatesolutions.com/work/projects/MT_grazing.html

A good article on forestry offset projects from the Oregon Small Woodlands Organization: http://www.ccffa-oswa.org/Henri.html

Big Sky Carbon Sequestration Partnership is working on regional carbon standards: www.Bigskyco2.org

Western Climate Initiative is our regional effort to address climate change involving several states and Canadian provinces: www.westernclimateinitiative.org

Katoomba Ecosystem Marketplace Website is a good website for information related to payments for ecosystem services: www.ecosystemmarketplace.com

Forest Trends, connected with the Ecosystem Marketplace, tracks projects and papers related to forest management: http://www.forest-trends.org/

Willamette Partnership in Oregon stacks ecosystem service payments to land owners: http://www.willamettepartnership.org/

The Bay Bank is the initiative around the Cheseapeake Bay that also bundles ecosystem service payments: http://www.thebaybank.org/

Duke University has the Nicholas Institute which put together a few policy briefs on carbon offsets: http://www.nicholas.duke.edu/institute/news-offsetseries.html

The USDA's Office of Ecosystem Services and Markets was authorized in the recent Farm Bill. They don't have a website yet, but they will be a good resource. For the announcement of USDA's OESM, see http://deltafarmpress.com/news/ecosystem-services-1229/

A blog on climate legislation in 2010: http://blogs.sciencemag.org/scienceinsider/2009/12/what-can-obama.html