

## **Carbon Credits: A new source of income from your woodlands.**

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Carbon Credits provide a whole new way of thinking about how to earn income from your land. It is the first tangible evidence that society values the services that your woodlands provide and that there are individuals and organizations out there that are willing to pay you to grow trees, also known as sequestering carbon dioxide, as a means to impact global warming.

So, how can you as a woodland owner cash in on this potential windfall? First, it is important to understand that we are not talking about large sums of money. A forestry project in the Lake States will only store somewhere between one to five metric tons of carbon dioxide per acre per year and, based on the current market price, that means the very most a woodland owner might receive is about \$7.25 per acre per year for the length of the contract. We'll talk more about this later. Most woodland owners cannot trade (sell) carbon credits directly on the Chicago Climate Exchange because most forestry projects are small and would not generate enough income from selling forest carbon sequestration offsets to cover the administrative costs of being a member and registering a project on the Chicago Climate Exchange. Therefore, woodland owners need to work with an Offset Aggregator.

Offset Aggregators function like a broker. They act as a bridge between the landowner with a small project and the Chicago Climate Exchange serving the needs of both parties. Aggregators, as the name implies, work to solicit forestry projects that are not large enough to qualify for a Carbon Financial Instrument on their own and bundle them together with other projects. Therefore, it is important to understand that when you sign a contract with an offset aggregator your contract is with that aggregator and not with the Chicago Climate Exchange directly. The offset aggregator is responsible to the Chicago Climate Exchange to administer the project contract, verify that the project information is factual and correct, insure that the project meets Chicago Climate Exchange rules and regulations, make payments to the landowners, and coordinate with Chicago Climate Exchange verifiers.

There are approximately sixty Offset Aggregators who are participating members of the Chicago Climate Exchange aggregating forest carbon sequestration offset projects in at least thirteen states. There are several Aggregators that are currently soliciting projects in Wisconsin as well as woodland owner organizations that are interested in the potential of acting as an aggregator or providing this service to their members. However, it is important to note that there are no Aggregators that have been sponsored or approved by any woodland owner organization or government agency to operate in the state of Wisconsin.

As a general rule there are two types of projects that qualify as forest carbon sequestration offset projects. The first are tree planting projects on lands that were not previously forested (afforestation) or the planting of trees following a harvest or the restoration of degraded forest lands (reforestation). Only projects that were planted after December 31<sup>st</sup>, 1989 are eligible to qualify as this type of project. Contracts for these types of projects are based on Carbon Accumulation Tables provided by the Chicago Climate Exchange that landowners use to calculate carbon sequestration by their tree planting project.

The other type of project eligible for forestry offset credits is forest enrichment projects. These are projects where carbon accumulation is increased through the implementation of sustainable forest management practices. Essentially, what steps have you taken to increase the growth of your trees (aboveground, woody biomass) that would not have occurred anyway by simply letting nature take its course. Contracts for these types of projects are based on a forest inventory and uses growth and yield models to estimate the change in growth (additional carbon sequestered) achieved through the practice of sustainable forest management.

The process to enroll your lands as a forest carbon sequestration offset project is fairly simple. You need to fill out an application form provided by the offset aggregator. The application form will require you to show that you have clear title to the land. You will also need to show that you are engaged in sustainable forest management. Having a forest stewardship management plan for your property and participating in a Forest Certification Program meet this requirement. Landowners participating in Wisconsin's Managed Forest Law Program would meet both of these requirements.

Next, you will need to calculate the amount of carbon sequestered by your project using one of the methods described above. The application process most Aggregators use will walk you step by step through the carbon accumulation calculation for tree planting projects. The carbon accumulation calculation for forest enrichment projects is far more complex and you will need to work with a consulting forester to determine the total amount of carbon sequestered through management. The aggregator is responsible to insure that your application is accurate and that your carbon accumulation calculations are correct. The Chicago Climate Exchange also employs independent third-party verifiers to review project reports, verify active management and maintenance of projects, and insure the accuracy of all information submitted.

Once your application has been submitted, approved, and verified the forest carbon sequestration offsets from your project are now eligible to be sold on the Chicago Climate Exchange. The contract that you sign with an aggregator will determine the date of entry and the terms of payment. The date of entry is not the same as the date your contract is approved. Remember, offsets are sold in 10,000 metric ton increments (Carbon Financial Instrument®). Most Aggregators simplify this process by selling Carbon Financial Instruments® on a quarterly or annual basis. When you receive payment also varies but most pay on a quarterly basis although some pay on an annual basis.

So how much money can a woodland owner expect to earn through selling forest carbon sequestration offsets?

The following example is based on a 40 acre red pine plantation planted in 2001. The estimated metric tons (mT) of carbon dioxide sequestered per acre per year are from the Chicago Climate Exchange's Reforestation Carbon Accumulation Tables for dense plantings (>250 stems per acre) of red pine in the Lake States. This calculation is based on a contract that is enrolled in 2008 through the Chicago Climate Exchange's guaranteed contract period ending in 2010.

First, calculate how many metric tons of carbon will be sequestered each year. The Chicago Climate Exchange's Reforestation Carbon Accumulation Tables estimates that 11 to 15 year-old red pine trees planted at a density of at least 250 trees per acre will sequester approximately 2.56 metric tons of CO<sub>2</sub> per acre per year.

$$40 \text{ acres} \times 2.56 \text{ mT/acre} = 102.4 \text{ mT}$$

Next, calculate how much of that will go directly into the reserve pool.

$$102.4 \text{ mT} \text{ less } 20 \text{ percent for the reserve pool} = 81.9 \text{ mT/year}$$

Now, multiply this number by the market rate for carbon credits. *Carbon credits are currently trading for \$1.80 per metric ton.*

$$81.9 \text{ mT/year} \times \$1.80/\text{mT} = \$147.46/\text{year}$$

This is your gross annual income, before Chicago Climate Exchange and Aggregator fees are applied. Subtract these fees from the total.

$$\$147.46 \text{ less the Aggregator fee of } 10 \text{ percent} = \$132.71/\text{year}$$

$$\$132.71 \text{ less the CCX trading fee of } \$0.20 \text{ per metric ton } (81.9 \text{ mT} \times \$0.20/\text{mT}) = \$116.33/\text{year}$$

This is your net annual income. Now multiply this by two (contract years of 2008 and 2009) to calculate your income for the first two years of the contract.

$$\$116.33/\text{year} \text{ for } 2 \text{ years} = \$232.66$$

Then in 2010 you are eligible to recover your reserve pool credits. The total amount of credits for sale is 143.3 metric tons (81.9 annual tonnage plus 61.4 reserve pool tonnage).

$$143.3 \text{ mT} = \$203.49 \text{ after fee removal (step four above)}$$

So a woodland owner with a 40 acre red pine plantation planted in 2001 would receive approximately \$436.15 total income from a contract enrolled in 2008. This amounts to approximately \$3.63 per acre per year of additional income you could receive from your woodlands.

Some of you are probably wondering what the "Reserve Pool" is? The Chicago Climate Exchange reserves 20 percent of carbon sequestration offsets as an insurance policy against unexpected losses of carbon from your property. The carbon accumulation tables are estimates of potential productivity. However a drought, insect or disease outbreaks, or a natural disaster like a fire, flood, or windstorm could damage or destroy your woodlands and release the carbon stored in your trees. If this should happen then the Exchange deducts credits from the Reserve Pool to compensate for these losses. If your losses exhaust what you have set aside in the reserve pool then you may be required to purchase carbon offsets to satisfy your contract.

The Chicago Climate Exchange may be a new source of additional income that many woodland owners can tap into. As interest grows in this market there will be increasing opportunities to take advantage of marketing forest carbon sequestration offsets from your woodlands.

However, it is important to understand that the Chicago Climate Exchange's current plan allows them to offer contracts through 2010. No decision has been made whether there will be a Phase III that will offer contracts for 2011 and beyond. No one can say for sure what the future holds but there will always be a future in growing trees.

This is the third and final article on a series of article about carbon credits and the Chicago Climate Exchange.

The material for this article was gathered from the Chicago Climate Exchange website located online at <http://www.chicagoclimatex.com/> and from the Center for Integrated Natural Resources and Agricultural Management's publication "*A Landowner's Guide to Carbon Sequestration Credits.*" [WWW document]. URL [http://www.cinram.umn.edu/publications/landowners\\_guide1.5-1.pdf](http://www.cinram.umn.edu/publications/landowners_guide1.5-1.pdf)