

Forestry Carbon Credit Project Summary and Projected Revenue

Carbon Credit Overview

Entities can generate Climate Reserve Tonnes (CRT's or carbon offset credits) for developing and implementing greenhouse gas (GHG) emissions reduction projects. In turn, these "credits" can be sold on the open market to entities that are producing greenhouse gasses as a mitigation of sorts. CRTs can be traded in the voluntary carbon market or transferred into the Voluntary Carbon Standard's unit of measurement, the Voluntary Carbon Unit (VCU). Unlike the Chicago Climate Exchange which is a registry and exchange, the CAR is only a registry and trading is generally facilitated over-the-counter. The CAR has various protocols for specific categories of projects. The CAR develops standardized, performance-based project protocols that provide specific guidelines for calculating, reporting and verifying greenhouse gas (GHG) emissions reductions from GHG offset projects. Currently, project protocols are available for underground coal mine, forest, landfill, livestock, nitric acid production, organic waste digestion, and urban forest projects. Leon County is currently registered with the Climate Action Reserve due to our efforts with the landfill gas collection project.

CAR Forestry Overview

The CAR has recently approved their revised Forestry Project Protocol 3.1 whereby three project types have been made available to generate carbon credits. These project types are: reforestation, improved forest management, and avoided conversion. Public lands are eligible to participate in both reforestation and improved forest management project types. With the appropriate technical support, Leon County can also participate in the CAR as it relates to our forested property within certain County parks. Due to historic forestry management activities within County greenways, it is anticipated that some acreage will qualify for the CAR Forestry Project Protocol 3.1.

Forested County Property

The Leon County Greenways are a mixture of state owned lands that are leased to the county and land that the county owns outright. They are managed for passive recreation and to "preserve" the plantation look or pre-Columbian ecosystems. This is accomplished through prescribed burning, replanting of native species (both trees and herbaceous plants), management of wildlife food plots, mowing of lawn (field) areas to simulate old hay pastures, herbiciding invasive exotics, trail maintenance and other forestry practices that are designed to keep a healthy, aesthetically pleasing, safe forest with abundant native wildlife.

Areas to reforest and how to accomplish reforestation has been determined and documented in Forest Stewardship Management Plans written by the UF Leon County Extension Forester with input by Florida Wildlife Commission, Florida Division Forestry and other UF faculty in various fields of expertise. Planting is either done by using *natural regeneration* or by *hand*. Site preparation has been a combination of mechanical and chemical means. The funding of these reforestation efforts has been accomplished mostly through a grant from the US Fish and Wildlife Service, moneys from the City of Tallahassee and Leon County Tree Banks. Site preparation and planting is done by a combination of work done by Leon County Parks, contractors and volunteers. County employees and the UF Leon County Extension Forester oversee and monitor the work done and the need for future management needs. All sites that are recommended for reforestation through the current Management Plan have been reforested.

Proposed Project

LandMark Systems, a professional forestry consulting company with specialized services in the forestry carbon markets, has identified approximately 365 acres of County Greenways that could qualify for a 'Reforestation' project under the CAR. LandMark conducted a pre-feasibility analysis, at no charge, to examine the potential cash flow and carbon credit benefits over a 20 year scenario¹. Preliminary findings suggest that, if structured correctly, this project could generate total net benefits of more than \$70,000 in revenue for Leon County over the 20 year period.

Technical Services

LandMark Systems' corporate office is located in Tallahassee, Leon County and is a leading provider of professional services, applications and technical products to both public and private entities engaged in forestry and natural resource management internationally. LandMark desires to provide a demonstration forestry carbon project whereby Leon County's Parks can effectively take advantage of opportunities in the carbon markets. LandMark Systems will provide project development and ongoing oversight services for Leon County Parks Department for the project area.

LandMark will provide eligibility, feasibility, design, implementation, on-going management, monitoring and reporting, verification oversight, and other services as directed by Leon County. Specific tasks for ongoing management will include: carbon monitoring; carbon inventory updates/adjustments; carbon profile report generation and delivery; coordination of annual verification and periodic field verification; CRT marketing; and CAR account support.

Total project development costs are estimated to be \$4,000 (this does not include inventory or verification costs which are required fees of CAR). The project is expected to be listed on the CAR by April 30, 2010. First round of credits are expected to be issued in 2011. Subsequent development and ongoing management costs are approximately \$3,000 per annum. CAR currently provides the highest quality carbon credits available in the United States and, therefore, commands the highest prices. LandMark desires to just cover a portion of its costs on this project through the annual management fees. In traditional circumstances fees for a project such as ours would be 65% more. The partnership and reduced fee will result in significant savings and an enhanced profit margin for the County.

Benefits to Leon County

This project could stimulate some or all of the following benefits: new source of direct revenue from CRT sales to support forestry management activities; enhanced commitment to a sustainable environment and economy; enhanced leadership in climate and energy initiatives; a framework for other counties to develop carbon reduction projects.

¹ See page 3, Projected Revenue

Projected Revenue

15% statistical discount and risk buffer
 8% interest rate
 \$ 15.00 market price (\$/CRT)

20 Year
 Annualized Cost \$5,887
 (Annualized Cost/Annualized Credits) \$6.76
 NPV \$70,485

Year	period	Total Non-Soil		Credits issued to project	Dvlpmnt costs	CAR & Verification			Total Benefits	Net Benefits	
		Incremental Actual Carbon	Buffer credits			Fees	Mngt costs	Total Costs			
2010	0		0	0	\$ -	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ (8,000)	
2011	1	425.2	64	361	\$ 4,000	\$ 1,072	\$ 3,000	\$ 8,072	\$ 5,422	\$ (2,651)	
2012	2	853.0	128	725	\$ -	\$ 1,145	\$ 3,000	\$ 4,145	\$ 10,876	\$ 6,731	
2013	3	865.6	130	736	\$ -	\$ 1,147	\$ 3,000	\$ 4,147	\$ 11,036	\$ 6,889	
2014	4	1,153.6	173	981	\$ -	\$ 1,196	\$ 3,000	\$ 4,196	\$ 14,708	\$ 10,512	
2015	5	1,183.9	178	1,006	\$ -	\$ 1,201	\$ 3,000	\$ 4,201	\$ 15,095	\$ 10,894	
2016	6	1,161.6	174	987	\$ -	\$ 5,197	\$ 3,000	\$ 8,197	\$ 14,810	\$ 6,612	
2017	7	1,138.7	171	968	\$ -	\$ 1,194	\$ 3,000	\$ 4,194	\$ 14,518	\$ 10,325	
2018	8	1,138.7	171	968	\$ -	\$ 1,194	\$ 3,000	\$ 4,194	\$ 14,518	\$ 10,325	
2019	9	1,103.1	165	938	\$ -	\$ 1,188	\$ 3,000	\$ 4,188	\$ 14,064	\$ 9,877	
2020	10	1,072.7	161	912	\$ -	\$ 1,182	\$ 3,000	\$ 4,182	\$ 13,677	\$ 9,495	
2021	11	1,087.9	163	925	\$ -	\$ 1,185	\$ 3,000	\$ 4,185	\$ 13,870	\$ 9,685	
2022	12	1,094.7	164	930	\$ -	\$ 5,186	\$ 3,000	\$ 8,186	\$ 13,957	\$ 5,771	
2023	13	1,094.7	164	930	\$ -	\$ 1,186	\$ 3,000	\$ 4,186	\$ 13,957	\$ 9,771	
2024	14	1,095.2	164	931	\$ -	\$ 1,186	\$ 3,000	\$ 4,186	\$ 13,964	\$ 9,778	
2025	15	1,116.5	167	949	\$ -	\$ 1,190	\$ 3,000	\$ 4,190	\$ 14,236	\$ 10,046	
2026	16	1,111.0	167	944	\$ -	\$ 1,189	\$ 3,000	\$ 4,189	\$ 14,166	\$ 9,977	
2027	17	1,045.6	157	889	\$ -	\$ 1,178	\$ 3,000	\$ 4,178	\$ 13,331	\$ 9,154	
2028	18	1,045.6	157	889	\$ -	\$ 5,178	\$ 3,000	\$ 8,178	\$ 13,331	\$ 5,154	
2029	19	997.8	150	848	\$ -	\$ 1,170	\$ 3,000	\$ 4,170	\$ 12,722	\$ 8,553	
2030	20	991.7	149	843	\$ -	\$ 1,169	\$ 3,000	\$ 4,169	\$ 12,644	\$ 8,475	
2031	21	976.7	147	830	\$ -	\$ 166		\$ 166	\$ 12,453	\$ 12,287	
20 yr: Total Credits				17,660				Total	\$ 57,797	\$ 128,282	\$ 70,485
Annualized Credits				871							