

Have You Done a Carbon Count On Your Course Recently?

By Mike Healy
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While some of you may feel that "Inconvenient Truth" is not very truthful, others believe that its primary spokesman fully deserves the Nobel Prize. Regardless of how you feel, rest assured that carbon counting is in all our futures.

A whole new carbon language is upon us: carbon neutral, carbon calculators, carbon credits, carbon capture, carbon sequestration, carbon offsets and many, many more!

So the essential question is this: Is your course carbon minus (-), carbon neutral, or carbon positive (+)? Carbon negative means your course captures or sequesters more carbon than it releases, carbon neutral means you capture and release about the same amount of carbon, and carbon positive means your golf course releases more carbon than it captures. For the purpose of this discussion, the major form of carbon discussed is carbon dioxide.

Many of you already know you can "Google" not only individual key words but nearly complete sentences to get all the information you could ever want on about any subject. "Google" the words "golf course carbon calculator" and you won't get what you may have hoped for, at least not calculators that have anything to do with golf course-related capture and generation of carbon.

So what follows is a very incomplete beginning of information that you should be able to use to create your very own carbon calculator. We all know that plants of all sorts capture/store more carbon than they emit. So your inventory of turfgrass, trees, shrubs and possibly ponds become your major source of carbon capture. Trees capture much carbon; fully 50% of their weight is carbon. One information source reviewed claims pine trees capture about 2/3 the amount of carbon that hardwoods do. Your turfgrasses contribute to soil carbon increase. If you are a die-in-the-wool conventional thinking turfgrass agronomist, increases in soil carbon aren't so good, as this equates to higher organic matter levels. If you are a carbon counting scientist, carbon capture resulting from increased production of organic matter is good. Does a wall-to-wall overseed increase carbon capture? Your ponds may also contribute to carbon capture, should they have such carbon dioxide loving plants as Duckweed and various kinds of algae.

So what on-course activities generate carbon? Obvious will be such things as gasoline and diesel fuel use, with diesel fuel having a slightly higher carbon generation per unit volume used than gasoline. Next on the list are natural gas and propane. What about electrical energy (total Kwh), fertilizers and pesticide use?

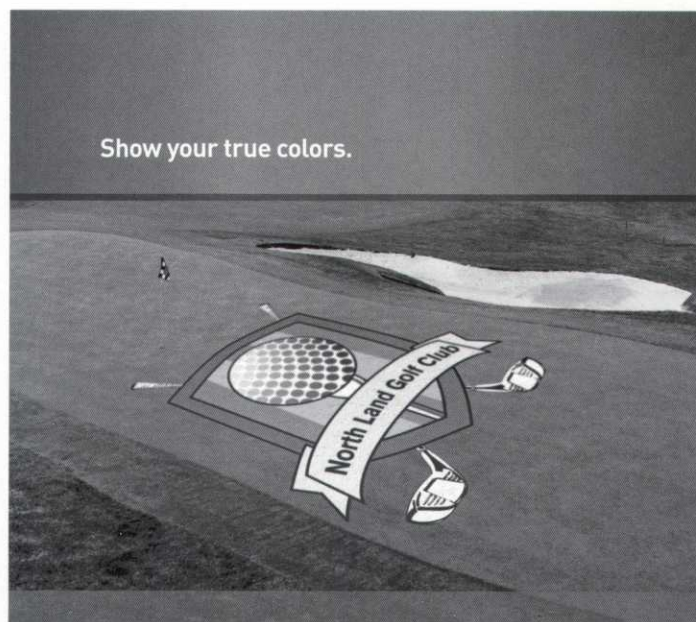
The carbon generated in the production of electrical energy, and in the production of fertilizers and pesticides does not end up being included on your balance sheet, as it is (or should be) debited to the producers of those products and not you. Your power company should be able to tell you what each Kwh of electricity sold to you generates in carbon emissions. Can the manufacturers of fertilizers and pesticides provide the same information? Some fertilizers used do cause the release of

nitrous oxide, considered to be a potent greenhouse gas.

And then there are the total human hours spent on your course -- you and your maintenance staff, the clubhouse staff, and all the golfers that spend time on your course each year. We humans require oxygen and expel carbon dioxide, so do we count as part of your carbon positive calculation the amount of carbon they generate?

So if a detailed and complete carbon calculator for your golf course becomes a reality, and you are found to have a carbon negative status, of what value will this be? Will you be able to tap into an existing or future carbon offsets plan for which your course will be paid for each net metric ton of carbon captured per year? Or do you only get to place a sign at your entrance proclaiming: "This golf course is a carbon negative facility"!

(Editor's Note: Michael J. Healy is a turfgrass pathologist in private practice operating out of southern Alabama. He can be reached at: 251 986 6240, mjhealy@gulftel.com, or through his website: www.sportsturfdiagnostics.com.)



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