CARBON DIETING: LATENT ANCILLARY RIGHTS TO CARBON OFFSETS IN CONSERVATION EASEMENTS

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I. CARBON DIETING: OVERVIEW

A. Article Overview

This article addresses a single systematic methodology for mitigating global greenhouse gases in the atmosphere.¹ That methodology is the creation, sale, and retirement of “carbon offsets.” Regarding carbon offsets, this article focuses on the use of conservation easements to underpin carbon offset projects. As this article explains, it is within the language of the much-used legal tool of conservation easements that we find what this article describes as “latent ancillary rights” from which we can create and allocate carbon offsets. In particular, this article examines what language, if any, should be inserted in conservation easements to insure the creation and desired allocation of carbon offsets. Because California has developed and implemented many of the first and most effective anti-global warming programs, including a climate registry and forest protocol based largely on carbon offsets, California is used as a model in this article.

A fundamental assumption of this article is that global warming is here, is causing serious problems, and will have disastrous consequences for all living creatures on earth unless immediate and desperate measures are taken.² This article

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† There are a number of so-called “greenhouse gases,” each with its own sources, effects, and duration in the atmosphere. For purposes of this article, carbon dioxide serves as a proxy for all such greenhouse gases. Included among the greenhouse gases are: carbon dioxide, methane, ozone, water vapor and that suite of chemicals collectively described as chlorofluorocarbons. For a more in-depth explanation of this science, see, e.g., ROBERT HENSON, THE ROUGH GUIDE TO CLIMATE CHANGE (2006).

² For a listing of several of the most comprehensive and influential compilations of global climate change-related data and analysis, see, e.g., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE (2007), http://www.ipcc.ch/ipccreports/assessments-reports.htm. See also SIR NICHOLAS STERN, THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW (2007). For extended research works on global climate change effects on biodiversity, see IDENTIFICATION AND GAP ANALYSIS OF KEY BIODIVERSITY AREAS: TARGETS FOR COMPREHENSIVE PROTECTED AREA SYSTEMS (Peter Valentine ed., 2007). See also ANANTHA KUMAR DURAIPPAH, ECOSYSTEMS AND HUMAN WELL-BEING: BIODIVERSITY SYNTHESIS (World Resources Institute 2005); 2004 IUCN RED LIST OF THREATENED SPECIES: A GLOBAL SPECIES ASSESSMENT (Jonathan E.M. Baillie, Craig Hilton-Taylor & Simon N. Stuart eds., 2004); THE NATIONAL ASSESSMENT SYNTHESIS TEAM, CLIMATE CHANGE IMPACTS ON THE UNITED STATES: THE POTENTIAL CONSEQUENCES OF CLIMATE VARIABILITY AND CHANGE (2001). For serious and sustained treatments of global climate change in the popular
also assumes that the reader shares this assumption and is acquainted with global warming issues. Accordingly, given the vast outpouring of global warming literature now available, this article does not provide a general overview of global warming issues. Instead, this article provides the reader with a brief contextual overview of three of the central regulatory responses to global warming in the United States with an emphasis on the use of carbon offsets as a mechanism for reducing greenhouse gas emissions. One remaining goal of this article is to remind the reader that every second, every greenhouse gas emission, every melting glacier and every ray of sunshine carries us closer to global warming apocalypse. Consequently, inaction is no longer an option.

B. Carbon Emission Reduction Overview

1. Carbon Offsets

As noted previously, the focus of this article is the use of conservation easements to support carbon offset projects. Accordingly, the characteristics of carbon offset projects will be discussed in greater detail below. By way of background, carbon offset projects are almost universally voluntary. In their simplest form, carbon offset projects involve commercial, industrial, and governmental entities voluntarily seeking to counteract the effects of their “carbon footprint” by reducing their own carbon emissions or by purchasing carbon “offsets” from other entities.

It is extremely important to note that while some carbon offsets are based on an entity reducing its own greenhouse gas emissions, in many instances carbon offsets may have nothing to do with reducing individual carbon emissions. For example, in some instances, an entity may purchase carbon offsets based on carbon emission reductions or carbon sequestration by other entities. A good example of a project that involves carbon sequestration rather than carbon emissions reductions is avoiding deforestation or replanting a forest that has been decimated. On the other hand, some carbon offsets may have no direct effect on carbon emissions or sequestration and, instead, represent some other environmentally beneficial action that can be said in some sense to counteract the environmental damage done by carbon emissions. For example, some carbon offsets involve subsidizing or purchasing energy efficiency and “green” power such as that generated by wind turbines. At the present time there are already a number of carbon offset programs in place that involve a variety of carbon offset types. No doubt many more carbon


3 See Mark Trexler, Renewable Energy Certificates to Carbon Offsets: What’s the Right Exchange Rate?, in VOLUNTARY CARBON MARKETS: AN INTERNATIONAL BUSINESS GUIDE TO WHAT THEY ARE AND HOW THEY WORK 49 (Ricardo Bayon, Amanda Hawn & Katherine Hamilton eds., 2007) [hereinafter VOLUNTARY MARKETS].

4 See VOLUNTARY MARKETS, supra note 3, at 101-15.
offset projects will develop in the future, limited only by our collective imagination.

Compared with cap and trade systems and carbon taxes, carbon offsets remain the most popular corporate anti-global warming measure. There are several reasons for this. First, carbon offsets are typically voluntary. Second, carbon offsets often do not require any changes in the purchasing entity’s emissions behavior. Third, carbon offsets can come with many “bells and whistles” and can have “warm and fuzzy” public relations benefits. For example, a major greenhouse gas emitter like an airline can obtain carbon offsets based on preserving endangered species habitat or replanting the rainforests. These offsets are then sold to the airline’s customers at modest prices. The public’s perception of combating global warming by paying a nominal fee tends to reduce the public’s concern about global warming with the added benefit that the public can feel that it has participated meaningfully in the battle against global warming (but from a safe distance and with minimal sacrifice). When the object of the carbon offset purchase is a “feel good” project such as saving or replanting forests, creating alternative energy supplies and providing habitat for endangered species, the public relations value of the carbon offset project can substantially leverage the entity’s own image and enhance advertising efforts. For example, when a major corporate emitter purchases carbon offsets that involve the protection and preservation of ecosystems or of particularly charming or iconic species, that corporation can not only market itself as generally “earth friendly” or “carbon neutral,” it can also associate itself with efforts to preserve that species or ecosystem.

One additional feature of carbon offsets that drives their popularity with carbon emitters is that they can be standardized and quantified. Because of these characteristics carbon offsets can be marketed. The establishment of carbon offset markets allows emitter purchasers to find carbon offset sellers. Such carbon offset sellers may be directly responsible for the creation of the offsets they bring to market. Other offset “dealers” include carbon offset “aggregators” who purchase carbon offsets and then sell them in the marketplace.

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6 Perhaps the most iconic, heart warming, and saddeningly-beleaughed species are those that live in the arctic, particularly penguins and polar bears. There is no doubt that it was the charm and charisma of polar bears that caused Borders Bookstores to use cute cartoonish polar bears on their bookmarks and other marketing products in 2007 and 2008. Despite Borders’s exploitation of the image of the greatly imperiled polar bear, nowhere in the stores of the bookselling giant was there any indication that Borders was actually doing anything to fight global warming—or to help save the polar bears whose images Borders exploited.

Despite the popularity of carbon offsets with carbon emitters and the general public, carbon offsets have not escaped criticism.\(^8\) One of the major criticisms of carbon offsets is that they do not reduce the purchaser’s own emissions and, instead, allow the emitter to continue polluting at previous levels or higher. Also, carbon offsets are not always transparent and may provide no guarantee of reducing or adapting to greenhouse gas emissions. In this regard, carbon offsets have been likened to the fourteenth century Roman Catholic practice of selling indulgences\(^9\) and even to brokers selling sub-prime mortgages.\(^10\)

Despite the criticisms of carbon offsets discussed in this article, carbon offsets can result in many beneficial outcomes. Thus, while other regulatory systems may result in greater reductions in carbon emissions from the actors themselves, carbon offsets can drive any number of anti-global warming and biodiversity enhancing programs. In terms of collective effect, carbon offset programs are far better than having no program in place at all.


> For 30 years, Steve Berger has been a no-till farmer of corn and soybeans on his 2,200 acres in Wellman, Iowa, as a way to protect his soil from erosion and keep organic matter in the ground to aid the growth of his crops. Berger also qualifies to sell carbon credits — credits that businesses and others buy to offset their own self-imposed emission caps from those who trap or keep carbon in the ground. That is secondary to the benefits the no-till method offers to his land, he said. “Last year, I made almost $3,000 from selling them, a little extra spending money for when my wife goes to Chicago,” Berger said. “But I’m not really sold on the whole thing. This is something I would do anyway, and some company is using me so it doesn’t have to clean up its own act.”

Fortunately, reports such as the one above are rare and it may be safely assumed that most carbon offset programs are net positive in terms of reducing carbon emissions, sequestering previously emitted carbon, or creating positive environmental outcomes that truly match up with the carbon emissions they are intended to offset.

\(^9\) Under the practice of indulgences, an individual could purchase entrance into heaven for himself or herself. Various and sundry other blessings, absolutions, penitences, and celestial favors could likewise be purchased. Just as there was no limit to the types of indulgences, there was likewise no limit on whom one could purchase indulgences for. Thus, a person might buy indulgences that would retrieve a relative from hell and grant the retrieved person an eternal heavenly residence. See, e.g., *Indulgences*, WIKIPEDIA: THE FREE ENCYCLOPEDIA, http://en.wikipedia.org/wiki/Indulgences (last visited Feb. 12, 2008).

2. Cap and Trade

Next in popularity to carbon offsets, at least with regulators, are administratively imposed carbon cap and trade programs. Unlike carbon offsets, cap and trade systems are typically mandated by a regulatory entity. Keeping in mind that this is an oversimplification, under a cap and trade regime, a cap on the collective greenhouse gas emissions of some entity group (e.g., agricultural concerns, power companies and airlines) is imposed. “Shares” collectively equaling the cap amount are then allocated to the regulated entities on some basis—for example historical greenhouse gas emissions per entity. Once shares have been allocated, each entity can decide whether to (a) adjust its behavior to meet its carbon emissions quota; (b) adjust its behavior to emit less than its carbon emissions quota and sell the extra shares; or (c) exceed its carbon emissions quota and purchase additional shares from less polluting entities.

Like carbon offsets, because cap and trade systems create fungible “shares” which can be bought and sold, they allow markets to develop. The development of markets has numerous benefits. For example, a market in greenhouse gas reduction credits allows players who have maintained or reduced their emission levels the opportunity to sell their shares and thereby receive economic benefit for their anti-global warming efforts. Likewise, the existence of a market insures that there will be sufficient credits for individual greenhouse gas emitters to purchase and thereby continue in business as usual without having to curb their greenhouse gas emissions. Another benefit of the cap and trade model is that the presence of greenhouse gas reduction markets rewards those players that develop ever more sophisticated and effective technology to reduce greenhouse gas emissions. As with carbon offsets, however, cap and trade systems have been roundly criticized.11

3. Carbon Tax

At the other extreme from voluntary carbon offsets is the carbon tax. Many, if not most, commentators believe that the only way to guarantee that greenhouse gas emissions will be reduced sufficiently to mitigate their effects to some degree is the imposition of a mandatory carbon tax.12 Not surprisingly, carbon taxes have received the most push-back from commercial and industrial carbon emitting entities. The only limits for what a carbon tax would “look” like and how it might operate are our collective imagination and what the market will bear. Given that almost every conceivable human activity results in a greenhouse gas emission,  

12 See id.; see also Tax vs. Cap-And-Trade, CARBON TAX CENTER (2007), http://www.carbontax.org/issues/carbon-taxes-vs-cap-and-trade/ (providing multiple compelling arguments from various sources in favor of a carbon tax over cap and trade mechanisms); see also CARBON FINANCE, supra note 7, at 132-36.
whether “upstream” or “downstream” from the human activity of concern, the
types of things and activities which might be taxed are nearly unlimited.

Indeed, the prospect of a carbon tax is daunting: both to those business entities
that would suffer negative economic consequences and to those regulators that
would suffer the political push-backs of imposing carbon taxes on such business
entities. Consequently, many players appear to be opting for voluntary carbon
offsets in the hopes of receiving political “credit” for being first-actors. At the risk
of being cynical, it is also likely that many players hope that by demonstrating
participation in a voluntary offset program, they can argue that a carbon tax is
unnecessary. This is not to denigrate voluntary carbon offset programs in any way.
Offset programs are a good thing and can be expected to deliver many social,
economic and environmental benefits in addition to reducing greenhouse gas
emissions. The question is thus not whether they are “good” or “bad.” The
question is how much voluntary carbon offsets can contribute to stopping the
juggernaut of global warming as compared to cap and trade and carbon tax
regimes.

C. Mea Culpa

In a discussion of global warming, it is tempting to blame a political figure, a
generation, or some commercial, industrial or governmental entity. To attempt to
place blame for global warming is beyond the scope of this article and, moreover,
most likely impossible. To put it bluntly, there are “smoking guns” everywhere
one might look. Moreover, given the global nature of the problem, any overview,
survey or analysis must first determine the scale at which examination of the
problem is to occur. Towns emit greenhouse gases, as do cities, counties,
prefectures and nations. Within any political boundary, greenhouse gas emissions
can be broken down by enterprise such as energy generation and transmission,
agriculture, construction, transportation, or simply clearing away and burning
tropical forests. When it comes to global warming, one cannot simply round up the
“usual suspects.” Every last one of us is a culprit.

D. A Brief Comment on the Literature of Carbon Markets

There are abundant resources for studying how carbon offset, cap and trade
and carbon tax systems can and do work. For example, over the past three years
there has been a remarkable and beneficial surge in the publication of high quality
books on the subject of carbon markets and emissions trading, a number of which
are referenced in this article.13 What is lacking, however, is substantial discussion

13 See, e.g., VOLUNTARY MARKETS, supra note 3. See also Tom James & Peter C. Fusaro,
ENERGY & EMISSIONS MARKETS: COLLISION OR CONVERGENCE? (John Wiley & Sons 2006); MOVING
to MARKETS IN ENVIRONMENTAL REGULATION: LESSONS FROM TWENTY YEARS OF EXPERIENCE (Jody
Freeman & Charles D. Kolstad eds., Oxford University Press 2007); Nathaniel O. Keohane &
Sheila Olmstead, MARKETS AND THE ENVIRONMENT (Island Press 2007); T.H. Tietenberg,
EMISSIONS TRADING: PRINCIPLES AND PRACTICE (RFF Press 2006); EMISSIONS TRADING FOR CLIMATE
of the on-the-ground efforts that underlie the types of broader programs discussed earlier in this article. In particular, while the works addressing carbon markets are well written and informative, they also tend to be abstract and often fail to address the real world legal tools and practices of the carbon market attorney—most notably the negotiation and drafting of purchase and sale agreements for carbon offsets and the drafting of conservation easements.

II. THE CALIFORNIA MODEL

A. The California Climate Action Registry (CCAR)

The California Climate Action Registry (CCAR) was established in California in 2001.\(^\text{14}\) The state of California created the CCAR to function as a non-profit entity that would partner with other non-profits as well as with businesses, energy generators, industries and the state itself. Private sector membership in the CCAR is entirely voluntary. Nevertheless, the CCAR membership list currently includes a remarkably large number of high-level entities, including state and federal agencies, special use districts as well as large-scale business, commercial and industrial entities. On behalf of its membership, the CCAR engages in research and information gathering which is made available to its constituents. By dispensing information and guidance, the CCAR provides leadership to California entities in reducing greenhouse gas emissions. The CCAR also provides “on-the-ground” functions such as standardizing and quantifying the measurement of greenhouse gas emissions and providing a registry to which CCAR members can report their greenhouse gas emissions. As noted in the CCAR publication the “General Reporting Protocol” (GRP): “The Registry provides leadership on climate change by promulgating credible and consistent greenhouse gas (GHG) reporting standards and tools for organizations to measure, report, certify and reduce their GHG emissions in California and/or the U.S.”\(^\text{15}\) The CCAR also provides protocols for mitigating carbon emissions through the use of forest-based carbon offsets. The recently promulgated emission reductions protocols of the CCAR are known collectively as the “Forest Sector Protocol.”\(^\text{16}\)

\(^{14}\) For an extensive and detailed overview of the history and workings of the California Climate Action Registry, see California Climate Action Registry home page, http://www.climateregistry.org/ (last visited July 27, 2008).

\(^{15}\) CALIFORNIA CLIMATE ACTION REGISTRY, CALIFORNIA CLIMATE ACTION REGISTRY GENERAL REPORTING PROTOCOL: REPORTING ENTITY-WIDE GREENHOUSE GAS EMISSIONS, (Version 3.0 2006), http://www.climateregistry.org/resources/docs/protocols/grp/GRP_V3_April2008_FINAL.pdf [hereinafter GRP].

\(^{16}\) CALIFORNIA CLIMATE ACTION REGISTRY, CALIFORNIA CLIMATE ACTION REGISTRY FOREST PROJECT PROTOCOL, (Version 2.1 2007), http://www.climateregistry.org/resources/docs/protocols/industry/forest/forest_project_protocol_version_2.1_sept2007.pdf [hereinafter FOREST PROTOCOL].
B. The CCAR Forest Protocol

The CCAR FOREST PROTOCOL is a unique companion to the GRP. The GRP establishes standards for measuring a variety of greenhouse gas emissions and a “clearinghouse” for various types of entities to report their emissions to. The GRP also collects data that may be useful in developing future greenhouse gas emission reduction and mitigation strategies. The recently enacted FOREST PROTOCOL, on the other hand is much more limited in scope. In contrast with the GRP, the FOREST PROTOCOL focuses on a single type of greenhouse reduction projects, namely forest-based projects. The mission of the FOREST PROTOCOL is thus to create a standardized system for reporting and certifying forest-based “projects” which offset greenhouse gas emissions. In other words, while the GRP is an information gathering system, the FOREST PROTOCOL is the next step beyond gathering information; it creates mitigation measures (i.e., offsets) based upon a single type of natural service, namely the carbon sequestration properties of forests.

The FOREST PROTOCOL defines “offsets” as follows:

[Offsets are] [d]iscrete GHG reductions used to compensate for (i.e. offset) GHG emissions elsewhere, for example, to meet a voluntary or mandatory GHG target or cap. Offsets are calculated relative to a baseline that represents a hypothetical scenario for what emissions would have been in the absence of the mitigation project that generates the offsets. To avoid double counting the reduction giving rise to the offset must occur at sources or sinks not included in the target or cap for which it is used.17

To understand the operation of the FOREST PROTOCOL, it is necessary to understand three terms of art which arise from the above definition and that appear with increasing frequency in the lexicon of greenhouse gas emission reduction strategies. These terms are “additionality,” “leakage avoidance” and “permanence.” Each of these terms is briefly explained below. The conservation easement drafting issues created by these terms are explained in later sections of this article.

1. Additionality

Additionality is defined in the FOREST PROTOCOL as “[f]orest project practices that exceed the baseline characterization, including any applicable land use laws and regulations.”18 Because additionality is an affirmative requirement of a forest

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17 FOREST PROTOCOL, supra note 16, at 7. For an excellent discussion of additionality issues, see Box 2.1: The Additionality Debate, in VOLUNTARY MARKETS, supra note 3, at 24.
18 FOREST PROTOCOL, supra note 16, at 5.
project intended to produce offsets it is frequently defined in the positive in the FOREST PROTOCOL. However, it is easier to understand additionality when that term is defined in the negative. Thus, a project fails to meet the FOREST PROTOCOL additionality requirement if the project merely accomplishes that which would have been accomplished anyway, whether by compliance with laws, by the performance of contractual obligations or by the operation of a conservation easement. Stated in still another fashion, for a project to have additionality it must be possible to state that “but for” the project the desired outcome would not have occurred.19

As explained in the FOREST PROTOCOL, for any given forest project, the method of additionality assessment will depend on the specific project activity under consideration. Examples of additionality-creating activities may include harvesting fewer trees than described in the baseline or protecting a forested area that would have been converted to commercial development with no trees. In other words, the same factors used to characterize project baselines will serve as the basis for demonstrating that the project activity is additional.20

As of the September, 2007, publication date of the FOREST PROTOCOL, the Registry would accept only three types of forest project activities.21 These activities and the qualitative aspects of additionality for each project activity type are described as follows. The first type is “Conservation-based Forest Management,” about which the FOREST PROTOCOL states, “[a] forest management project must demonstrate that it is additional by showing that the planned project activities exceed the applicable mandatory forest management laws used to characterize the project baseline.”22 “Reforestation,” the second type of allowable project, requires that the project applicant “demonstrat[e] that the project had been out of forest cover for at least ten years and that governing land use statutes and regulations do not require the project area to be reforested.”23 The final type of project is conservation (often referred to in academic literature and project documents as “avoided deforestation”), which the FOREST PROTOCOL explains in this manner: “A forest conservation project demonstrates its additionality initially by showing that, but for its act of protecting the project area, the project area would have been converted to a non-forest use.”24

19 See Sandra Brown, Ian R. Swingland, Robin Hanbury-Tenison, Ghillean T. Prance & Norman Myers, Changes in the Use and Management of Forests for Abating Carbon Emissions: Issues and Challenges Under the Kyoto Protocol, in CAPTURING CARBON & CONSERVING BIODIVERSITY: THE MARKET APPROACH 48-50 (Ian R. Swingland ed., 2003) [hereinafter CAPTURING CARBON] (explaining the need for additionality requirements, the author notes “[t]here is a concern that many carbon-sink projects would have happened anyway for commercial or political reasons other than the climate-change obligations and therefore add nothing to the effort to reduce global warming.”). See also ALAN REED, PRECIOUS AIR: THE KYOTO PROTOCOL AND PROFIT IN THE GLOBAL WARMING GAME (Green Fields America 2006) (noting that “[a]dditionality is peppered throughout the negotiations, reports, and documents connected with the Kyoto Protocol”).
21 Id. at 11.
22 Id. at 24.
23 Id. at 25.
24 Id. at 26.
2. Leakage Avoidance

The FOREST PROTOCOL requires that forest project “developers” address “leakage,” of which there are two types: “activity-shifting leakage” and “market leakage.” Pursuant to the FOREST PROTOCOL, assessment of activity-shifting leakage is required throughout the life of the project while assessments of market leakage are optional, but “strongly encouraged.”

The FOREST PROTOCOL defines activity-shifting leakage as “the displacement of activities from inside the [offset] project’s physical boundaries to locations outside the [offset] project’s boundaries, as a direct result of the project activity, causing an increase in emissions outside of the [offset] project’s physical boundaries.” For example, if a project involved placing a conservation easement prohibiting all development on forest land which legally could have been developed for residential, commercial or industrial purposes the project has likely achieved additionality. However, if the development that was planned for that property then takes place outside of the offset project’s boundaries activity-shifting leakage has occurred. Such activity-shifting leakage can take place “on-site” (i.e., within the project entity’s boundaries as opposed to the project’s boundaries) or off-site (outside of the project entity’s boundaries). The consequence of on-site activity-shifting leakage is that it must be quantified and deducted from calculations of the project’s greenhouse gas emissions reductions.

The FOREST PROTOCOL defines market leakage as occurring “when the project activity affects an established market for goods, thus causing the substitution or replacement elsewhere and causing GHG emissions that, in effect, offset or mitigate the project’s GHG reductions.” The example of market leakage provided in the FOREST PROTOCOL involves a conservation-based forest management project which reduces the number of trees harvested from within the project’s boundaries. If the reduction in timber products on the market caused by the project results in increases in timber harvesting elsewhere to compensate for the reduction, market leakage is deemed to have occurred.

3. Permanence

Oddly, the FOREST PROTOCOL does not define “permanence,” even though the context of the document indicates that for any given carbon offset project there

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25 Id. at 27.
26 Id. at 28 (emphasis added).
27 Id. at 6 (defining an “entity” as “[t]he basic unit of participation in the Registry, which includes a corporation or other legally constituted body, and city or county, and each state government agency.”).
28 Id. at 27.
29 Id. at 29.
30 Id. See also CAPTURING CARBON, supra note 19, at 50 (“The mere presence of the potential for leakage does not make a project unattractive; instead strategies need to be developed to either mitigate it and/or account for it.”).
must be a mechanism to insure its long term survival, i.e., its “permanence.” The protocol’s lack of a definition of permanence is acknowledged in a footnote, stating “The protocols do not make a determination of what may be considered a ‘permanent’ reduction. This decision may be made by external programs or processes.”

Taking the place of a definition of “permanence” is the requirement that all projects under the aegis of the FOREST PROTOCOL must “be secured with an easement that dedicates permanently the project land area to forest use.” As the FOREST PROTOCOL explains in detail:

The purpose of the easement requirement is twofold. The easement acts as a legal guarantee that a project’s existing and additional forest carbon stocks can remain protected in perpetuity by requiring forest practices that protect and encourage additional carbon stocks. If a natural disturbance resulted in the loss of forest carbon, the easement terms would facilitate the restoration of the forest and as a result, carbon stocks. The easement also facilitates environmental co-benefits, since it must be consistent with the open space and natural habitat terms of the Internal Revenue Code, as stated above.

It is precisely this “permanence” requirement that expressly introduces the conservation easement as a critical legal component of voluntary carbon offsets under the FOREST PROTOCOL. As will be explained in greater detail below, the mandatory use of conservation easements in creating voluntary carbon offsets under the FOREST PROTOCOL raises a number of critical drafting issues which must be addressed by the practitioner.

C. Carbon Offsets

As explained earlier, voluntary carbon offsets represent a non-mandatory mechanism for commercial, industrial and governmental entities to counteract the negative environmental consequences of their respective greenhouse gas emissions. Again, carbon offsets do not necessarily involve a participating entity reducing its own greenhouse gas emissions in any way. To the contrary, carbon offsets are intended to create positive environmental consequences that to varying degrees “make up for” or otherwise mitigate a particular entity’s carbon emissions. While some carbon offsets do indeed involve reduction in or sequestration of greenhouse gases, it is not a general requirement of carbon offsets and allows offsets to occur in many different varieties. As will be explained in greater detail below, there are many varieties of carbon offsets on the “carbon menu.”

31 Id. at 57.
32 Id. at 16.
33 Id. at 17.
1. The Carbon Menu: Carbon a la Carte

The most common forms of voluntary carbon offsets involve forests in one way or another. Forests have been described as providing “a natural infrastructure for the planet, regulating the atmosphere, hydrological cycles and much of the biodiversity on earth.”34 Despite the remarkable carbon sequestration abilities of forests, this does not mean that forest-based carbon offsets are without problems. For example, it has been noted that “[t]here are real concerns about permanence and measurement and these issues are often used to argue that forestry offsets are simply too hard to regulate effectively.”35

Nevertheless, forest-based offsets and other varieties of offsets are being created and marketed at ever-increasing rates. Such offsets, where fungible and perhaps even bundled into an investment package, may be thought of as “retail” or “commodity” carbon. In such markets, where carbon is simply a commodity, “prices will be driven to their lowest possible level [and] they will be determined largely by the costs of production and their ability to provide compliance.”36 Regarding the voluntary markets which have grown up around retail or commodity carbon it has been noted that, “[t]hough it is not yet self-evident that a voluntary market for GHGs will ever grow large and robust, it is increasingly certain that this market is growing at a rapid clip: from a few million tons [in 2004] to as much as 20 million tons today [citation omitted].”37

2. The Carbon Menu: Gourmet Carbon38

In contrast with “commodity carbon” is “gourmet carbon.”39 As noted above, commodity carbon is based almost exclusively on ecosystems. To a lesser extent commodity carbon is based on human systems that capture and sequester carbon—but do little else. Whatever the source of commodity carbon, it is for the most part a single and quantifiable product. Gourmet carbon, on the other hand, includes what might be called “feel good” assets in addition to its carbon capturing and sequestering properties. Such “feel good” assets are technically referred to as “co-benefits.” Among some of the more obvious feel good co-benefits are tree planting, water quality improvements and the creation or preservation of wildlife habitat. The consequence for a carbon seller or aggregator of being able to market gourmet carbon is that gourmet carbon prices can have much more elasticity than commodity carbon prices thereby allowing the carbon seller or aggregator to

34 David Brand & Marisa Meizlish, An Investor’s Perspective on the Voluntary Carbon Market, in VOLUNTARY MARKETS, supra note 3, at 90.
35 Id. at 89.
36 VOLUNTARY MARKETS, supra note 3, at 103.
38 VOLUNTARY MARKETS, supra note 3, at 102 (coining the phrase “gourmet carbon”).
39 Id. at 103.
charge more for a given offset. The higher selling price of gourmet carbon offsets is the result of carbon offset purchasers seeking to purchase carbon offsets that will have the most appeal to the ultimate consumers, i.e., the carbon offset purchaser’s customers. Likewise, if the carbon buyer is not marketing to its own customers, it may still pay a premium for gourmet carbon offsets to maximize the public relations benefits of appearing to be green or at least “carbon neutral.” Thus the ideal gourmet carbon product might be a project that not only sequesters carbon, but also allows the purchaser to claim that it is supporting a popular global warming cause, for example wildlife relocation (or as it is now euphemistically described: “assisted migration”).

The co-benefits associated with gourmet carbon will likely be “put on display” for their public relations appeal with increasing frequency. Consequently, as consumers come to learn that carbon offsets do not in fact represent reductions in the emitter’s own carbon footprint, it is possible that co-benefits used for “green advertising” will attract closer scrutiny and perhaps become targets of criticism. Such criticisms will take the form of accusations that the emitter is purchasing the gourmet carbon for self serving purposes and thus engaging in “green-washing.” While self-serving motives will certainly surface in the voluntary carbon market, it should be kept in mind that the emitter’s motives do not necessarily lessen the positive outcomes provided by the carbon offset in question. Indeed, corporate actors almost always act to further their self interests—and in doing so, they may bring benefits to other causes. Their self interest should not blind us to the positive consequences of their actions.

D. The Purchase and Sale Agreement

Although the conservation easement will often take center stage in discussions of carbon offsets, in practice, the purchase and sale agreement (PSA) for the carbon offsets (as opposed to a PSA for a conservation easement) can be an equally important document and the “linchpin” of the carbon offset transaction. It is in the negotiation and drafting of the PSA that the buyer (carbon emitter) and seller (offset creator or aggregator) will hammer out the many details involved in a carbon offset exchange. Many of the key “deal points” will center on the buyer’s attempt to insure that there will be additionality and no activity or market leakage. The seller, on the other hand, will struggle to meet the buyer’s need for additionality and the absence of leakage—both potentially daunting tasks. Regarding additionality, there may be other players in the mix (e.g., the landowner, the carbon aggregator, funders and local government) who have engaged in their own negotiations to create the project thus inadvertently destroying additionality. Also, it may be extremely difficult to find a project location where activity leakage will not occur. Another issue that will surface will be the buyer’s imperative to insure the permanence over the period of the offset (usually 100 years). Part of the permanence requirement can be satisfied by a perpetual conservation easement on

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40 Id. at 103.
Another permanence issue that occurs in forest-based offsets is insuring the continuation of the sequestration properties of the offsets if a catastrophic event such as a fire or flood destroys the forest from which the carbon offsets are derived. While there may come a time when insurers will routinely issue policies protecting the carbon buyer, currently the most common form of “insurance” is for the seller to have “back-up” forests in which the seller owns the carbon offset credits which the seller may simply “swap” for the destroyed forest.  

The buyer will also require various means of monitoring the project with associated reporting requirements and administrative costs. Some of these monitoring and reporting requirements may also be required by the legal framework within which the project falls.

III. CONSERVATION EASEMENT DRAFTING ISSUES

A. Latent Ancillary Rights: The Minimalist Approach

As noted above, the FOREST PROTOCOL mandates that permanence in a forest-based project be achieved by the existence of a perpetual conservation easement governing the site on which the project is located. The FOREST PROTOCOL additionally requires that the conservation easement “[s]upport the [carbon offset] project” and include in the recitals a statement “indicating the easement is perpetual and conforms with Section 42823 of the California Public Health and Safety Code.” That statute is summarized in the FOREST PROTOCOL as follows: “Pursuant to Section 42823 of the California Public Health and Safety Code this easement shall be consistent with 1) the preservation of open space and 2) the protection of relatively natural habitat, as described in Section 170(h)(4)(A)(ii) and (iii) of Title 26 of the United States Code.”

There are several interesting things about the above requirement from the FOREST PROTOCOL. The first is that conservation easements almost always include the reference to the IRS Code relating to the protection of open space and relatively natural habitat as cited in Section 42823 of the California Public Health and Safety Code. Consequently, the mandated reference to Section 42823 of the California Public Health and Safety Code is redundant. The second interesting
thing is that as a result of the redundancy just mentioned, even without the exact recital required by the FOREST PROTOCOL a standard conservation easement would almost certainly provide the permanence required by the FOREST PROTOCOL and likewise would almost certainly protect open spaces and “relatively natural habitat.” The third interesting thing is that the conservation easement language mandated by the FOREST PROTOCOL does not by itself create a carbon offset project.

As noted above, what does create a carbon offset project is a PSA between a seller or aggregator of carbon offsets and a carbon offset buyer that taps into the “latent ancillary rights” in an underlying conservation easement. The rights necessary to engage in a carbon offset project on eased land rights are “latent” because they don’t exist in the express language found in the standard conservation easement. These rights are “ancillary” because they represent a palette of rights or functions that are auxiliary or supplementary to those normally found in a conservation easement. In other words, the “standard” conservation easement is designed to extinguish or otherwise nullify the development rights on a given property. These development rights include the familiar rights of the landowner to engage in residential, commercial or industrial development of the property. In contrast with these standard development rights are latent ancillary rights, which presumably survive the extinguishment or nullification of the “standard” development rights.

47 It is important to remember that PSAs are often used in the purchase and sale of conservation easements. For example, a landowner and land trust may enter into a PSA for the purchase and sale of a conservation easement on forested property. However, as used here, the PSA is between a carbon seller or carbon aggregator and a carbon buyer. Thus, the property right that is the subject of the PSA is the right to create and market carbon offsets (the permanence of which is maintained by a perpetual conservation easement). In other words, one of the original parties to the conservation easement may find itself contracting with a person or entity who is not a party to the conservation easement who is acting as an “aggregator” or “middle-man” in the reporting and sale of carbon offsets. In addition to “brokering” deals linking carbon sellers to carbon buyers, a carbon aggregator may also contract with the seller to undertake on the seller’s behalf compliance with the FOREST PROTOCOL requirements for the property in question. Indeed, so burdensome and complex are the FOREST PROTOCOL rules and requirements that there may eventually be a number of third-party entities that specialize in assisting carbon offset buyers and sellers achieve compliance with the FOREST PROTOCOLS for a fee. Such rules would, at the very least, involve carbon quantification, carbon management, sequestration enhancement and a multitude of reporting requirements. Such entities would likely also participate in the ultimate sale of the carbon offsets, perhaps through one or more exchanges that are developing. That third-party aggregators will likely become familiar figures in carbon offset trading is evidenced by the recent purchase by the investment firm Natsource Asset Management, L.L.C. of emissions credits for 60,000 tons of certified carbon dioxide emissions reductions from the Van Eck forest project in Humboldt County, California. The Van Eck project is the first such project to be verified to reduce carbon emissions in California and is managed by the Pacific Forest Trust, which also holds a conservation easement on the property. See Lindsay Riddell, Investors Jump into Forest Carbon Credits, PACIFIC BUSINESS NEWS, May 16, 2008, http://boston.bizjournals.com/pacific/othercities/sanfrancisco/stories/2008/05/19/story8.html?b =1211169600%5E16366890. Natsource Asset Management is the largest purchaser of carbon credits world-wide. See Cool Climate, Hot Commodity: Carbon Banking for Climate Benefits Gains Market Momentum, FOREST LIFE, Summer 2008, at 4.
Given the very brief recital required by the FOREST PROTOCOL, simply adding that language to a conservation easement can be considered a minimalist but sufficient drafting practice. One potentially negative consequence of such a minimalist approach is that it does not designate which party to the conservation easement is entitled to engage in a carbon offset project on the eased land. This leaves open the potential for additional negotiations and possibly infighting once one of the parties day-lights the possibility of engaging in a carbon offset project on the property. Thus, a minimalist approach may avoid a negotiating glitch in the present but increases the probability of a hostile negotiating process in the future. The operative assumption should be that no one will want to leave any chips on the table.

B. Latent Ancillary Rights: Hide and Seek

Any practitioner drafting a conservation easement for forested land which may form the basis for a carbon offset project should make drafting decisions for the conservation easement based on the possibility that a carbon aggregator may want to purchase carbon offsets based on the carbon sequestration and storage properties of the forested land. For attorneys practicing in California, one approach is simply to follow the minimalist guidelines set forth in the FOREST PROTOCOL and described above. Similarly, for attorneys practicing in states that have a registry and project protocol such as California’s, the attorney may choose to follow the guidance, if relevant, of the FOREST PROTOCOL. If the minimalist approach is followed, it leaves open the possibility that an entity interested in purchasing and selling carbon offsets may negotiate with one or more of the parties to the conservation easement to obtain the rights to market the carbon sequestration and storage properties of the eased land. This can in turn lead to in-fighting between the conservation easement holder and the landowner as to who is entitled to sell the offset credits, especially if the dollar value of the offsets is high.

A similar problem can occur when the party drafting the conservation easement is sophisticated regarding carbon offsets but the other parties are not. In drafting a conservation easement on forested land when the other parties are unsophisticated about carbon offsets, the attorney and client must decide whether to include explicit carbon offset language in the document. In making this decision, a key consideration is whether including carbon offset language will become a “wake-up-call” for the opposing legal counsel and their clients. If the drafting attorney elects to include express references to carbon offsets in the operative document not only will it possibly alert an otherwise oblivious party, it may result in that party exercising any leverage it might have to force the drafting party to include language giving the newly enlightened party the right to create and market the carbon offsets. This is a pitfall to avoid as the prices paid for carbon offsets can be substantial. For a party to lose these rights because its legal counsel day-lighted the potential carbon offsets can obviously lead to rancor between client and attorney. Keeping in mind, however, that concealment of potential carbon offsets may be ethically questionable, the best course of action is for the drafting attorney
to consult his/her client regarding the tactical and ethical decision as to whether to include carbon offset language in the operative documents.

One drafting strategy that fits between language expressly creating and allocating carbon offsets and no such language at all is to refer to ancillary development rights generically and without reference to carbon offsets. For example, the typical conservation easement does any one or more of the following: (i) it extinguishes the development rights of the grantor landowner; (ii) it prohibits the grantor landowner from exercising any development rights; or (iii) it vests the development rights in the conservation easement holder while prohibiting the holder from ever exercising such rights. It is important to note that the “development rights” discussed above refer to land improvements such as clearing the land and then building residential, commercial or industrial structures on the land. In conservation easement practice, the phrase “development rights” refers only to the types of development just described and not to latent ancillary rights such as the marketing of carbon offsets. Accordingly, a conservation easement drafter could extinguish the “regular” development rights, or otherwise render their use legally impossible, without affecting the carbon offsets that could be derived from eased forest land. The drafter could thus include language in the conservation easement allocating all “ancillary rights” to the landowner or to the easement holder, depending upon the particular circumstances of the negotiations among the parties to the conservation easement. This language could later be used to support the argument that the holder of the easement’s ancillary rights is entitled to market the carbon offsets from the property.

On the other hand, assuming that all of the parties to a carbon offset “deal” are equally sophisticated about carbon offsets so that no one engages in legal “hide-and-seek,” the allocation of carbon offset rights can be a part of the overall negotiation for the PSA (for the conservation easement) or the conservation easement itself. For example, the potential holder of carbon offset rights might be a landowner, a land trust or a third party aggregator. Assuming that an agreement has been reached regarding which of such parties will be endowed with the power to create and market carbon offsets, the easement drafter will then be tasked with drafting language that expressly grants the carbon offset rights to the agreed upon party.

C. Latent Ancillary Rights: Re-cycling of Existing Easements

The carbon sequestration properties of forests exist in a form of slow motion flux. For example, trees up to one hundred years of age are at their zenith in capturing and sequestering carbon. At some point thereafter, the trees may begin to lose their carbon capture and sequestration properties.\(^48\) Even later in time the trees may die, at which time they can actually begin to release carbon back into the atmosphere. The following two sections examine how parties to existing conservation easements might be able to “re-tool” those easements to take

\(^{48}\) See generally Melanie Jarmann, Climate Change 14 (Palgrave 2007).
advantage of the situation where a forest is capturing and sequestering high amounts of carbon and thereby creating a potential carbon offset transaction.

1. Creating Value Through Easement Amendments

There are far more conservation easements that do not address latent ancillary rights than those that do. Stated another way, of the many thousands of conservation easements currently in play, at best guess, it is likely that the number of conservation easements that address carbon offsets, wetland mitigation credits, or other latent ancillary rights is very small. One way to re-tool existing conservation easements to address carbon offset credits is by amending the original document. The most academically and practically sound standard for amendments is that they must either be neutral with regard to the conservation values or they must enhance the conservation values. Assuming that the landowner and the easement holder agree to amend a conservation easement to allow for conservation-based forest management or otherwise allow the creation of carbon offset rights under a given state’s forest protocol and further assuming that such an amendment is either neutral to or enhances the conservation values, it should be possible to create a carbon offset project from an existing conservation easement.

If it turns out that the forest would not have been managed for conservation but for the amendment, the additionality requirement should be met. Another positive consequence of a mutually agreed upon amendment is that it would have the salutary effect of forcing the parties to decide who is most entitled to the credits and any revenue they might generate. Addressing the ownership issue in the document language itself may reduce the potential for disagreement and a souring of the relationship between the landowner and the easement holder by removing any lingering ambiguity as to ownership.

2. Creating Value Through Side Agreements

In addition to “recycling” existing conservation easements by amendment, it should also be possible to generate carbon offset credits simply by the parties striking a “side deal.” Like the previous example, assume the existence of a forested area that is subject to a conservation easement which does not mention carbon offsets. Assume next that the trees in the forest are at their peak of capturing and sequestering carbon but the forest is being managed for commercial timber harvesting. In such an instance it is possible that a carbon aggregator or

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50 In this instance, the “side deal” would almost certainly be a PSA. However, unlike the PSA for a conservation easement, this PSA would be for the purchase and sale of carbon offset credits. Moreover, this PSA would address issues such as additionality, leakage, permanence, monitoring, risk allocation and price.
carbon buyer might contract with the landowner or the easement holder to purchase the carbon offsets. Because the conservation easement as drafted is not a project and is pre-existing, the conservation easement alone does not pass muster under the additionality requirement. However, if the landowner or easement holder can contractually agree to change the forest management plan so that the forest is managed on a conservation basis, then the additionality requirement should be met, and, pursuant to the FOREST PROTOCOL, it should be possible to create a carbon offset project based on the change of the forest management program to a conservation-based program.\footnote{See FOREST PROTOCOL, supra note 16, at 24.}

As one can imagine, such recycling of conservation easements raises the question discussed in previous sections: namely, in the absence of a previous allocation, who receives the right to market and sell the carbon offsets? One powerful argument in favor of the easement holder is that if the easement holder is a qualified land trust it deserves the right to market the offset credits by virtue of the holder’s status as being subsidized by the public because of its nonprofit, charitable status. An equally persuasive argument can be made for the landowner. Because activities and uses not prohibited by or inconsistent with the conservation easement belong to the landowner, absent any language to the contrary, the right to market carbon offset credits should likewise revert to the landowner.\footnote{See HANDBOOK, supra note 46, at 398-400 (“Drafters must consider the impact of the easement on ancillary development rights that might be redirected by the owner.”).} Again, the best attorney practice is for the ownership of offset marketing rights to be a part of the initial negotiations with results of the negotiations to be embedded in a PSA, a conservation easement or a side agreement.

One other problem is that the “re-tooling” of existing conservation easements to harvest any last carbon offsets such easements might contain would very likely divert funding to ageing conservation easement projects. As a matter of public policy, this funding arguably should instead be used to create new and better projects rather than propping up older easement-based projects. Thus far this does not seem to be happening, but this issue is almost certain to surface in the future.

\textbf{D. Latent Ancillary Rights: The Quo Pro Quo Rule}

Thus far we have discussed what might be regarded as “tactical” considerations in including carbon offset language in PSAs for conservation easements and in conservation easements themselves. There is, however, one tax consideration that applies only to landowners who are seeking tax deductions for the donation of conservation easements, namely the so-called \textit{quid pro quo} rule. Stated simply, the \textit{quid pro quo} rule has developed in federal tax law applicable to charitable organizations to avoid “double-dipping” by tax-payers who donate an asset for an ostensibly charitable purpose (e.g., the donation of a conservation easement) for which they then receive some form of non-charitable benefit. When such tax-payers seek further compensation for their “donation” by deducting the
amount of the charitable donation from their federal tax obligations they are likely to trigger the *quid pro quo* rule. In the case of conservation easement practice, the *quid pro quo* rule applies to landowners who deduct from taxes the appraised value of a donated conservation easement when the donation of the easement is the basis for other quantifiable benefits to the landowner. For example, if a landowner donates a conservation easement to a land trust in order to receive governmental approvals for a development project, per the *quid pro quo* rule the landowner cannot also take a full tax deduction for the donation of the easement. Instead, the landowner must deduct the dollar amount of the benefit that accrued from the development approval from the dollar amount of the deduction. If the result is a negative number, the landowner is barred from receiving any tax deduction for the donated easement.

Although it appears that there are no published cases on this precise issue, it is almost a certainty that a landowner who donates a conservation easement and also receives funding from the sale of carbon offsets from the eased land must subtract the dollar value of the offsets from the dollar value of the tax deduction. While landowners who seek both a tax deduction for a donated conservation easement and revenues from a carbon offset project on the eased land may represent a small sub-set of all landowners donating conservation easements (or marketing carbon offsets), the financial consequences from operation of the *quid pro quo* rule should always be kept in mind by the conservation easement/carbon offset attorney.

To recap, the landowner may be subject to timing constraints that do not burden the easement holder or carbon aggregator. For example, if the landowner is going to be the seller of the carbon offsets the landowner must demonstrate additionality. If the basis of the carbon offset is a donated conservation easement that prohibits development and timber harvesting additionality is achieved. Stated differently, if the conservation easement is the carbon offset “project,” it may be said to have “additionality” because “but for” the easement there would be no avoided deforestation. However, if the landowner seeks a tax deduction based on the donation of the conservation easement, the same “but for” test can be used to prove that landowner has received a *quid pro quo*. Under such circumstances, the “but for” test is a double-edged sword that in effect proves that a *quid pro quo* has occurred, thus nullifying or reducing any federal tax deduction.

For a landowner to receive compensation for the creation of carbon offsets and also to receive a federal tax deduction for the donated conservation easement that created the additionality for the carbon offsets it may be necessary for the

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53 According to noted conservation easement tax guru and attorney Stephen J. Small, there is no case law on the application of the *quid pro quo* rule in conservation easement practice. According to Small, the *quid pro quo* rule “is not unique to [IRC] section 170(h) but cuts broadly across section 170 charitable contributions law.” Stephen J. Small, *Proper and Improper Deductions for Conservation Easement Donations, Including Developer Donations*, http://www.privatelandowner network.org/plnpro/improperdeductions.asp (citing Ottawa Silica Company, Ct. Cl. No. 27-278, 49 AFTR 2d 1160 (1982), Jordan Perlmutter, 45 T.C. 311 (1965), and Treas. reg. section 1.170A-14(h)(3)(i)).

54 Id.
landowner to create multiple business entities. Under this scenario, one business entity would donate the land while the other business entity would sell the carbon offsets. What is readily apparent from this hypothetical is that it may be both complicated and a sham immediately obvious to the applicable taxing authority. Another solution may be to engage in creative timing. Under this scenario, the landowner would first donate the conservation easement for which it would receive a tax deduction and then later sell carbon offsets based on the easement. Here the problem is that the longer the landowner waits the greater the probability of avoiding the *quid pro quo* rule, but the lower the probability of proving additionality. In view of the absence of legal authorities on the additionality and *quid pro quo* rule strategies discussed above, their consequences remain speculative and thus subject to further inquiry, which hopefully this article will stimulate.

V. CONCLUSION

This article provides an overview of three of the most common carbon emission reduction programs in the United States: (i) carbon offset programs; (ii) cap and trade programs and (iii) carbon tax programs. Using the California Climate Action Registry Forest Protocol as a framework, the article introduces the reader to the operation of carbon offset projects and provides a working lexicon of carbon offset terms such as additionality, leakage and permanence. The article then examines the concept of latent ancillary rights as applied to carbon offset rights based on conservation easements. The article concludes by discussing how the *quid pro quo* rule might interact with donated conservation easements upon which carbon offset projects are based.

Although there have been many criticisms of carbon offsets, this should be an impetus for standardizing and reforming the process, perhaps by making it more transparent to its ultimate consumers, the general public and business entities seeking to do the right thing by reducing their carbon footprints. Such standardization and reformation would avoid the unfortunate consequence of eliminating or marginalizing a process that holds great promise for creating positive environmental outcomes.

Regarding the underlying subject matter of this article, namely global warming, we must proceed with utmost speed, creativity, collaboration and personal sacrifice to mitigate the global apocalypse that we have created for ourselves. Perhaps the most difficult part of our collective endeavor to mitigate global warming will be to do so while maintaining our humanity, optimism, and faith.