

Perpetuity, Latent Ancillary Rights, and Carbon Offsets in Global Warming Era Conservation Easements

by James L. Olmsted

James L. Olmsted is a nationally recognized conservation easement and land trust attorney. He wishes to thank Nancy A. McLaughlin, Professor of Law at the University of Utah School of Law, and Jeff Pidot, former Chief of the Natural Resources Division at the Maine Attorney General's Office, for their help in reviewing earlier drafts of this Article.

The reality of global warming and climate change is indisputable. The vast majority of scientists in all countries who have addressed this subject have spoken: global warming is real, and it is happening now.¹ The world's scientists also harbor no doubt as to the cause. It is humanity's discharge into the atmosphere of enormous amounts of heat-trapping "greenhouse gases."² This unprecedented assemblage of scientists has also predicted that runaway global warming will result in nothing short of a biological, environmental, social, and economic cataclysm.³

What remains to be seen is precisely how global warming effects will play out. The world's scientists have explained that the timing and extent of global warming-caused catastrophes will in many cases be determined by various "tipping points," or environmental states beyond which there can be no return.⁴ The most immediately understood tipping point is based on the melting of our polar ice caps that is occurring in a dramatically rapid nonlinear and exponential manner resulting from powerful feedback loops.⁵

Of all the governmental and nongovernmental entities and collectives poised to fight global warming, one of the leaders in the fight will be the land trust⁶ community.

1. For the most recent institutional report on climate change in the United States, see GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES, (Thomas R. Karl et al., eds., 2009) (a remarkably candid and disturbing report commissioned by the George W. Bush Administration and written for the sophisticated layperson with a minimum of scientific jargon), <http://www.globalchange.gov/us-impacts> (last visited June 21, 2009). For the most comprehensive collection of global warming data and analysis to date, see INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE (2007) (also known as the Fourth Assessment Report) and CLIMATE CHANGE 2007: SYNTHESIS REPORT (a summary of the voluminous Fourth Assessment Report). Note that the Fourth Assessment Report is updated in the publication, SYNTHESIS REPORT, CLIMATE CHANGE: GLOBAL RISKS, CHALLENGES & DECISIONS (2009) (developed for the United Nations Framework Convention on Climate Change meeting to be held in Copenhagen in December 2009), <http://climatecongress.ku.dk/> (last visited June 21, 2009). See also Wilfried Thuiller, *Climate Change and the Ecologist: The Evidence for Climate Change Now Seems Overwhelming*, NATURE 550 (2007).
2. There are a number of so-called greenhouse gases (GHGs), each with its own sources, effects, and duration in the atmosphere. Included among the GHGs are: carbon dioxide (CO₂), methane, ozone, water vapor, and that suite of chemicals collectively described as chlorofluorocarbons. For purposes of this Article, CO₂, frequently referred to generically as carbon, serves as a proxy for all such GHGs. For a more in-depth explanation of the science of GHGs, see, for example, ROBERT HENSON, THE ROUGH GUIDE TO CLIMATE CHANGE (2006).
3. See, e.g., MARK LYNAS, SIX DEGREES: OUR FUTURE ON A HOTTER PLANET (2008); SIR NICHOLAS STERN, THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW (2007); ELIZABETH KOLBERT, FIELD NOTES FROM A CATASTROPHE (2006). See also ENCYCLOPEDIA OF GLOBAL WARMING AND CLIMATE CHANGE (S. George Philander ed., 2008) (a three-volume set of extensive and sophisticated notations on global warming and climate change in encyclopedic format); PAUL BROWN, GLOBAL WARMING: THE LAST CHANCE FOR CHANGE

(2007) (a powerfully illustrated compendium of causes and effects of multiple global warming and climate change phenomena).

4. Julia Whitty, *The Thirteenth Tipping Point*, MOTHER JONES, Nov.-Dec. 2006, at 44.
5. To explain this phenomenon in a nutshell, ice has a very high albedo, or reflectivity, allowing it to reflect much of the sun's energy back into space. However, as ice melts from increased temperatures caused by the release of GHGs into the atmosphere, it turns to water, which has a very low albedo, meaning that water tends to absorb heat. Thus, the melting of the polar ice caps creates a nonlinear feedback loop in which the rate of melting increases exponentially. The tipping point in such a system is the point at which the global forces unleashed by human-caused GHGs can no longer be stopped, even in the now unlikely scenario in which we were to completely stop emitting prodigious amounts of GHGs into the atmosphere. See MARK BOWEN, THIN ICE: UNLOCKING THE SECRETS OF CLIMATE IN THE WORLD'S HIGHEST MOUNTAINS (2005); PAUL ANDREW MAYEWSKI & FRANK WHITE, THE ICE CHRONICLES: THE QUEST TO UNDERSTAND GLOBAL CLIMATE CHANGE (2002). See also Andrew C. Revkin, *Arctic Ice Melting Faster Than Expected*, N.Y. TIMES, Dec. 11, 2006, <http://www.nytimes.com/2006/12/11/science/11cnd-arctic.html> (last visited June 11, 2009); James McClintock et al., *Ecological Responses to Climate Change on the Antarctic Peninsula*, AM. SCIENTIST 302 (2008).
6. Land trusts (also known as conservancies) are nonprofit entities legally entitled to hold conservation easements. Conservation easements are statutorily authorized perpetual easements on land that specify prohibited and permitted uses of the eased land. By far the most common use of conservation easements is to prohibit residential, commercial, and industrial development on the eased land consistent with the specific "conservation values" enumerated in the easement. Many land trusts hold portfolios that include both conservation easements and fee title to land. The goal of all land trusts is to preserve and protect the environment through market transactions such as outright cash purchases

However, with such dire predictions playing themselves out in the background, there has been surprisingly little written about how the land trust community should address global warming. This Article makes two recommendations regarding the drafting of conservation easements in the age of global warming. The first recommendation relates to drafting language that will ensure perpetuity in conservation easements where the eased land has been adversely affected by global warming. The second recommendation relates to drafting conservation easement language that addresses “latent ancillary rights” in the eased land that pertain to global warming, for example the carbon sequestration⁷ process in forested land. Included in this discussion is how conservation easements can be used to create “carbon offsets,”⁸ a latent ancillary right and marketable product based on the carbon-reducing properties of forested land. Because we are in the midst of a beneficial outpouring of scholarship on both global warming and conservation easements, this Article will not attempt a survey of either field. Instead, the purpose of this Article is to address a few critical issues that are unified by their relationship to the drafting of perpetual conservation easements from which carbon offsets may be created in the age of global warming.

I. Global Warming and Perpetuity

A. Prophylactic Termination Provisions

The most prevalent standard for judicial termination of a conservation easement is that conditions have changed making it “impossible or impractical” to carry out the purposes of the conservation easement.⁹ These purposes are in turn

of easements and land. Land trusts are also beneficiaries of remarkably foresighted federal statutes that provide substantial tax benefits to landowners who make charitable donations of conservation easements that satisfy certain requirements.

7. Carbon sequestration refers to the capture and storage of carbon. It is widely believed that healthy trees of a certain stage of development sequester carbon as part of the process of photosynthesis. Burning trees in which carbon is stored can result in carbon emissions, i.e., the opposite of carbon sequestration.
8. See *A Consumer's Guide to Retail Carbon Offset Providers: A Report From Clean Air Cool Planet*, <http://www.cleanair-coolplanet.org/ConsumersGuidetoCarbonOffsets.pdf> (last visited June 12, 2009) (defining “carbon offset” as “[t]he act of reducing or avoiding [GHG] emissions in one place in order to ‘offset’ [GHG] emissions occurring somewhere else”). It is important to note that many other authorities define carbon offsets much more broadly as any environmental benefit the degree and nature of which can be correlated to a fixed amount of carbon emissions reductions. See also Daniel L. Aaronson & Michael B. Manuel, *Conservation Easements and Climate Change*, SUSTAINABLE DEV. L. & POL'Y (Winter 2008), at 27 (defining conservation easements and suggesting their use for carbon capture and carbon sinks). While the variety and complexity of carbon offsets should not be underestimated, for purposes of this Article, discussion will be limited to forest-based carbon offsets. Carbon offsets are discussed in greater detail later in this Article.
9. See Treas. Reg. §1.170A-14(g)(6); Nancy A. McLaughlin & W. William Weeks, *In Defense of Conservation Easements*, 9 WYO. L. REV. 1 (2009); Nancy A. McLaughlin, *Rethinking the Perpetual Nature of Conservation Easements*, 29 HARV. ENVTL. L. REV. 421 (2005). See also RESTATEMENT (THIRD) OF PROP. SERVITUDES §7.11 (2000).

typically based on specific “conservation values.”¹⁰ To avoid the inappropriate termination of a conservation easement, most modern conservation easements contain a provision stating that the grantor and grantee agree that certain specified conditions shall not be grounds for termination or extinguishment based on impossibility or impracticality.¹¹ Such conditions most often focus on economic inequities created by the enforcement of the conservation easement. Thus, conservation easements commonly provide some variant of the following language:

In making this grant of Conservation Easement, Grantor acknowledges that uses prohibited by the terms of this Conservation Easement may become more economically valuable than permitted uses and that neighboring properties may in the future be put entirely to such prohibited uses. It is the intent of both the Grantor and Grantee that any such changes will not be deemed to be circumstances justifying the termination or extinguishment of this Conservation Easement.

Variants of the above language can be created to avoid termination based upon the argument that climate change-caused consequences have made the conservation easement impossible or impractical to carry out. For example, language such as the following could be added to protect the perpetual existence of a conservation easement:

Grantor and Grantee agree that the loss of species, and/or the habitat of such species, the protection of which is included in the conservation values, as a result of climate change shall not alone be a basis for termination or extinguishment of this Conservation Easement.

Grantor and Grantee agree that the presence of invasive species which have permanently adapted to and now permanently inhabit the eased land shall not alone be a basis for termination or extinguishment of this Conservation Easement.¹²

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10. The distinction between conservation “purposes” and conservation “values” as used in most model conservation easements today often seems like a distinction without a difference. For example, the two terms are frequently used interchangeably with no explanation. Although this issue does not appear to have been raised in the body of scholarship rapidly developing around the drafting and use of conservation easements, one explanation suggests itself. That is, the terms conservation purpose or purposes denote the collective conservation values. In this sense, the conservation purpose or purposes may be regarded as the general form, while conservation values describe the specific and individual values protected.
 11. ELIZABETH BYERS & KARIN MARCHETTI PONTE, *THE CONSERVATION EASEMENT HANDBOOK* (2d ed. 2005).
 12. Climate change is expected to induce migrations of plant and animal species to new locations where they will likely multiply. Under normal conditions, such new immigrants might be regarded as invasive species and eradicated from an eased property. Ironically, in the global warming era, it may well be that land trusts find themselves becoming the stewards and protectors of invasive species they formerly considered as the “enemy” and invested prodigious amounts of time, money, and energy to eradicate. See ALAN BURDICK, *OUT OF EDEN: AN ODYSSEY OF ECOLOGICAL INVASION* (2005).

Grantor and Grantee agree that formerly seasonal precipitation that has been replaced by permanent drought conditions shall not alone be a basis for termination or extinguishment of this Conservation Easement.

Whether to include such language must be considered when drafting any conservation easement. In the above examples, the language may be so specific and limited that these provisions might become “swamped” by other climate change effects that could collectively render the conservation easement terminable on grounds that it is impossible or impractical to carry out. Where proposed language is determined to be too specific, broader language, such as the following, may be used:

Grantor and Grantee agree that global warming and climate change effects, including, but not limited to, reduced precipitation, desertification, extreme weather events, flooding, and de-glaciation shall not alone be a basis for termination or extinguishment of this Conservation Easement.

Such broad provisions could address meteorological mega-anomalies such as reduced or increased precipitation, desertification, extreme weather events, flooding, and de-glaciation; geographical mega-anomalies such as erosion, loss of topsoil, and changes in salinity, acidity, or other characteristics of natural bodies of water; and biological mega-anomalies such as the loss of plant, animal, fungal, and microbial species through migration or extinction, the loss of “essential species,” such as pollinators (bees and bats), the loss of iconic mega-fauna, including various ungulates such as elk, moose, and deer and top predators such as bears and the big cats. Language could also be developed that would protect the perpetuity of conservation easements in the face of losses of species habitat and biodiversity.¹³

The above provisions are designed to protect perpetuity by preventing the inappropriate termination of a conservation easement based on the impossibility or impracticality of maintaining conservation values in instances where such conservation values are stated both specifically and, alternatively, in broader terms. It must be kept in mind, however, that in all such instances it is assumed that for any given conservation easement subject to attack on the basis of the loss of specified conservation values, that other conservation values in the easement remain viable. Stated another way, even if the property can no longer serve the original conservation purposes that the parties intended, e.g., a protected wetland is now desert or submerged, it still serves other collateral conservation purposes worthy of protection by the investment of social resources.

Just as conservation easements may be inappropriately terminated, it is also possible that they may be inappropriately maintained, in which case the social investment in the conservation easement is squandered. For example, in those instances where all conservation values become impossible or impractical to carry out, termination and redevelopment of

the easement elsewhere may well be warranted. This concern is addressed in the following provision:¹⁴

Grantor and Grantee agree that harmful climate change effects shall not be a basis for termination of this Conservation Easement, so long as any of the conservation values shall remain viable and capable of protection under the terms of this Conservation Easement. In the event that all conservation values become impossible or impractical to carry out, this Conservation Easement may be terminated and the proceeds from the released development rights used to establish a new conservation easement based on the same conservation values in another location.

B. *Sinking Ship Amendments*

As global warming and climate change advance, land trusts will be confronted with increased challenges in protecting conservation values in a dramatically changing world. In such instances, the parties to a conservation easement that fails some primary purposes may seek to amend the conservation easement to regain its usefulness. Emergency amendments can be expected to create a tension between the pre-amendment, perpetual easement and the post-amendment, potentially nonperpetual easement. Currently, drafters of conservation easement provisions avoid defeating perpetuity by including in conservation easements the standard that any amendment must either be neutral to or enhance the conservation values of the easement.¹⁵ However, this standard creates tension when an amendment required to maintain conservation easement functionality conflicts with the original conservation values. For example, imagine that a pre-amendment conservation easement contains a conserva-

14. The above discussion and sample provision address those termination proceedings in which only the donor's intent is raised as an issue. Such proceedings would include those in which a conservation easement is donated as a charitable gift requiring that a court respect donor intent. For example, assume a donor has clearly expressed the intent to protect habitat for the grizzly bear and donates an easement protecting prime habitat for the bear. If the bear migrates north due to global warming, the donor might well prefer that the easement be terminated and the proceeds used by the easement holder to protect the habitat to the north (rather than continuing to protect the original parcel as open space or habitat for other species).

Likewise, the above discussion and provision may also be useful in termination proceedings for purchased easements. In such proceedings, the court should ascertain the intent of all the parties (including funders) as to what should happen when global warming causes major changes. Ideally, the conservation easement itself should indicate whether the parties would want the easement to remain in place as long as there are any conservation resources worth protecting, even if different from those on the property at the time of the easement's creation, or whether the parties would prefer that the easement be terminated and the proceeds used to protect land in some other location that has conservation resources similar to those that were protected by the original easement.

Under still another scenario, if land trusts want the discretion to do what they think is best at the time the changes take place (rather than specifying which road must be taken in the easement), they should negotiate for that discretion at the time of the easement's creation and memorialize the grant of discretion in the conservation easement itself—although, an easement that permits the holder land trust to terminate it in its discretion is not perpetual as required under federal tax law.

15. Nancy A. McLaughlin, *Amending Perpetual Conservation Easements: A Case Study of the Myrtle Grove Controversy*, 40 U. RICH. L. REV. 1031, 1072-75, 1090 (2006).

13. Julia Whitty, *By the End of the Century, Half of All Species Will Be Gone*, MOTHER JONES, May-June 2007, at 36.

tion value that requires the forested area in the eased land be managed to achieve a natural state consisting of evergreen trees of mixed age, size, and density. Next, assume that global warming caused drought, and high temperatures have turned the forested area into a tinderbox. Given these conditions, not surprisingly, a catastrophic fire breaks out that completely destroys the native evergreen forest. To protect the denuded area from further damage due to erosion, the decision is made to revegetate the burned area. However, it is scientifically determined that due to global warming if native evergreen trees are planted they will not survive. Accordingly, it is decided to replant with even-aged deciduous trees. Obviously, this creates a problem because replanting with deciduous trees conflicts with the conservation value of maintaining the formerly forested area in its natural state of mixed-age evergreen forest.

One approach to this quandary is to create a new standard for amendments that allows the conservation easement holder to amend a conservation easement to protect the broader conservation values from harmful global warming-caused effects. An example of such a standard might be, “any amendment must be neutral to or enhance specific conservation values or protect the broader conservation values from harmful global warming-caused effects.” Applying this standard to the example above would allow the easement holder to weigh the options of maintaining the forested area in its natural state, in the face of scientific opinion that this would fail, or replanting the former forested area with deciduous trees. To ensure that this global warming “safety valve” is correctly used, the conservation easement could appoint third-party reviewers of such amendments. The third-party reviewer with the ultimate authority to approve an amendment would be a judge, who will be asked to approve an amendment that may be inconsistent with the conservation values sought to be protected by the easement. However, the easement could also appoint expert advisors who would provide their input to the judge. This system of third-party reviewers (including institutional reviewers) would review amendments that are not neutral to or enhancing of the original, specific conservation values to verify that they do indeed counteract or mitigate the effects of harmful global climate change on other perhaps broader conservation values.

One approach that will not work, as tempting as it may be to use it, would be to amend the conservation purposes of the easement. Most authorities on the subject agree that the purpose of an easement cannot be changed outside of a judicial *cy pres* proceeding.¹⁶ This is a result of state charitable trust law and, if the easement is donated and a tax deduction taken for the donation, it also becomes a matter of federal tax law.¹⁷

Of course, global warming era conservation easements could be drafted so that counteracting or mitigating harmful global warming and global climate change effects are conser-

vation values in the first instance. Thus, the drafting choice suggested here is whether to change the standard for approving amendments or to make more fundamental changes to the conservation values themselves. One significant hazard of changing the standard for approving amendments is that the Internal Revenue Service (IRS) might conclude that the conservation purpose of a conservation easement that contains such an amendment paragraph is not “protected in perpetuity” and thus, is not eligible for federal tax incentives. This conclusion tilts the decision in favor of changing the conservation values themselves. For example, one solution might be to draft the conservation purposes of the easement broadly, e.g., to protect open space, or wildlife habitat generally, thus allowing for numerous global warming changes over time to be made while still protecting those broad purposes. Whichever approach is chosen, it must take into account rapid changes in the scientific understanding of the causes and effects of global warming.

C. Restoration and Remediation Sticker Shock

Most conservation easements provide that the grantee has the right to inspect the eased property and the grantor, the grantee, or both, have the right to restore or remediate any condition that harms the conservation values. For example, if an eased property allows public access, and visitors to the property have caused damage due to foot traffic, a walking trail could be built and maintained. If damage requires more remediation, culverts could be installed to allow water to run under the trails and slender bridges could be placed over wetlands to prevent ecological damage.

Some easements task only one party with restoration and remediation obligations. Under the typical scenario, when one party must undertake restoration and remediation, the other party retains “oversight” responsibility and the right to approve or veto specific restoration and remediation activities. Such rights of approval will invariably be conditioned on a reasonableness standard. The party that is most frequently charged with restoration and remediation is the grantor. Indeed, many land trusts will not accept a property from a grantor that will not commit to restoration and remediation.

The problem with restoration and remediation is that it can be disastrously expensive. For example, if flooding in a small river causes the river to change course and damage high-value ecological assets, it could cost hundreds of thousands of dollars, and perhaps even millions, to reroute the river to its original course and to repair the flood-damaged portions of the property. To avoid exposing a grantor or grantee to such massive liabilities, language can be crafted such as the following: “Grantee shall have the right, but not the obligation, to undertake restoration and remediation consistent with the conservation values of this conservation easement.”

Another long-standing drafting practice to reduce risk is the so-called *force majeure* provision. The typical *force majeure* provision will excuse one or multiple parties from paying for damages caused by events beyond the speci-

16. See, e.g., RESTATEMENT (SECOND) OF PROP.: SERVITUDES §7.11 (2000).

17. See, e.g., *id.*; I.R.C. §170(h)(5)(A); Treas. Reg. §1.170A-14(g)(6); Uniform Conservation Easement Act §3 cmt. (revised 2007); Uniform Trust Code §414 cmt. (revised 2005). See also generally McLaughlin & Weeks, *In Defense of Conservation Easements*, *supra* note 9.

fied party's or parties' control. Such provisions are often identifiable by the traditional contractual exclusion from liability for "acts of God." Such a provision could protect the grantor or grantee from financially disastrous liability for restoration and remediation from events such as a flash flood or wildfire. Again, many land trusts would reject such a provision if it allowed the grantor to escape responsibility for restoration and remediation, regardless of the original cause.¹⁸

In the age of global warming, one can expect ever more damage to the conservation values of a given property and therefore more exposure to the costs of restoration and remediation. Because climate scientists have warned us to expect hotter climates that create more extreme weather events, flooding, drought, desertification, migration or extinction of native flora and fauna, and invasions of other non-native species, there will be more instances of harm to the ecological assets of conservation easements, and that harm will be more severe as well. As a matter of protecting their clients, attorneys for each party must allocate risks and, where possible, avoid exposing their clients to potentially immense financial risks incurred in restoration and remediation in the age of global warming.

D. Global Warming Ark Versus Park Easements

As part of the drafting process, the parties may want to consider the purposes to which conservation easements will be put as the effects of global warming inexorably increase. One such decisionmaking framework characterizes conservation easements as "ark versus park."¹⁹ An ark conservation easement may be designed to function as a temporary stopping point for species migrating northward to escape the effects of global warming in their southern habitats. Problems would arise when such easements appear to no longer be used in their ark function of serving as temporary refugia for species forced to migrate by global warming. Proper drafting language could allow the easement to be terminated and the proceeds used to create other, viable ark easements. An example of language creating an ark easement would be as follows:

Grantor and Grantee agree that this Conservation Easement may be terminated without judicial proceedings once it is scientifically determined that the eased lands are no longer being used as a temporary resting area for species migrating in response to global warming. Once this Conservation Easement has been terminated, the proceeds from the released development rights shall be allocated to Grantee to

18. Arguably, exoneration from restoration could have tax consequences to the grantor. Treas. Reg. §1.170A-14(g)(5)(ii) requires that "[a]dditionally, the terms of the donation must provide a right of the donee to enforce the conservation restrictions by appropriate legal proceedings, including but not limited to, the right to require the restoration of the property to its condition at the time of the donation." Consequently, an easement that included such language of exoneration would not be eligible for federal tax incentives.

19. James L. Olmsted, *Capturing the Value of Appreciated Development Rights on Conservation Easement Termination*, 30 ENVIRONS L. & POL'Y J. 39, 2006 (defining and discussing ark and park easements).

be used to acquire new conservation easements currently being used as resting areas for migrating species.

Such a provision would, however, violate the requirement under federal tax law that the conservation purpose of a tax-deductible conservation easement be "protected in perpetuity."²⁰ Accordingly, landowners would not be eligible for federal tax incentives for donating ark easements. However, government entities and land trusts might wish to purchase such easements, and some landowners might be willing to donate such easements without claiming federal tax incentives. In creating an ark easement, one must also consider state law. A few of the easement enabling statutes require that conservation easements be perpetual, and a few require that easements have minimum terms.²¹

If the parties agree that the conservation easement should be perpetual and serve whatever purpose global warming-altered nature puts it to, the parties can draft a park easement using almost any of the templates for perpetual conservation easements currently in use by the land trust community. Park easements should state their conservation purposes in broad terms, such as the protection of the natural habitat of fish, wildlife, or plants, or similar ecosystems—this language comes from the Treasury Regulations habitat protection conservation purpose—thus enabling the purpose of the easement to remain viable even as conditions and species on the ground change. Park easements may be the best means of facilitating the response to global warming. As Prof. Richard Brewer has suggested, creation of a "series of refuges" or protected areas that migrating species may permanently colonize or use as stepping stones on their journeys to more hospitable climes may be the optimum use of conservation easements to mitigate many of the environmental stressors that global warming will inflict on the world's species.²²

II. Latent Ancillary Rights and Carbon Offsets

A. Latent Ancillary Rights

Latent ancillary rights are those rights created by a conservation easement that are not typically expressly identified, allocated, or reserved to the grantor or to the grantee.²³ In particular, they are rights that are created by new technolo-

20. See I.R.C. §170(h)(5)(A); Treas. Reg. §1.170A-14(g)(6).

21. One should always be aware of the operative law governing any given conservation easement. Thus, perpetual conservation easements donated as tax-deductible charitable gifts are governed by federal tax law and state law (including the relevant state easement-enabling statute and the state laws governing the administration of charitable gifts). Conservation easements that are purchased by (as opposed to donated to) governmental entities and land trusts need not satisfy federal tax law requirements and can be drafted to give the holder broad amendment and termination discretion, provided such discretion is consistent with the requirements of the state easement-enabling statute.

22. RICHARD BREWER, *CONSERVANCY: THE LAND TRUST MOVEMENT IN AMERICA* 102 (2003).

23. See *THE CONSERVATION EASEMENT HANDBOOK*, *supra* note 11, at 398-400 ("Drafters must consider the impact of the easement on ancillary development rights that might be redirected by the owner.")

gies or by new ways of conceptualizing the traditional property metaphor of a “bundle of sticks,” with each stick being a different right and presumably subject to ownership by one or more parties. Because of the nontraditional nature and novelty of latent ancillary rights, they are often overlooked in conservation easement negotiation and drafting.

B. Carbon Offsets

There are numerous approaches to control global warming available to government and the private sector. A number of these approaches involve the use of market forces or economic incentives and disincentives to induce various entities to engage in anti-global warming behaviors. Of the options employing market forces and economic controls, three stand out as the most likely to result in widespread implementation. These three options are carbon offsets,²⁴ cap-and-trade

24. Carbon offset programs seek to reduce or mitigate global warming-caused changes by allowing almost any entity, including individuals, commercial and industrial enterprises, and governments, to compensate for or “offset” their carbon emissions (their carbon “footprints”) by purchasing carbon offsets. Once a carbon offset program is functioning and generating funding by the sale of carbon offsets, that revenue typically is distributed to environmentally beneficial activities that in most instances at least tangentially relate to global warming. For example, one currently popular use of carbon offset-generated dollars is to preserve forests that sequester carbon. Preserving forests by protecting them from development or timber harvest is known as avoided deforestation. Alternatively, carbon offset revenues can be used to enhance existing protected reserves through planting trees (afforestation) or to implement forest management plans designed specifically to enhance a forest’s ability to sequester carbon. From these examples, it can be seen that carbon offsets do not necessarily represent reductions in the carbon emissions of the carbon offset seller. Moreover, carbon offsets may be only indirectly related to global warming, if at all. For example, carbon offset revenues could be applied to such environmental purposes as habitat restoration or the protection of an endangered species, purposes that may relate to global warming only remotely. In many cases, entities may purchase carbon offsets and then resell them directly to the end-user. For example, an electricity-producing utility may purchase carbon offsets that it then resells to its customers so that the customers can offset their electricity use carbon footprint. In such cases, the benefit to the reseller is to meaningfully, if indirectly, offset its own GHG emissions, presumably as a matter of corporate or governmental good conscience or for public relations purposes. Presumably, carbon offset resellers are frequently able to reap the public relations benefits of purchasing and selling carbon offsets at little if any costs to themselves because it is the end-user that pays. Although carbon offset programs are almost exclusively voluntary, this market is fast developing and already generating profits that will attract increasing numbers of investors. Because the protocols for creation, verification, and valuation of carbon offsets are generally complex and vary among the rapidly growing number of voluntary carbon offset markets now in existence, in-depth discussion of these protocols is beyond the scope of this Article. Likewise, because there are literally hundreds of different types of carbon offsets, it is impossible to describe them all or to even come close to doing so. On the other hand, one primary distinction that can and should always be made is whether a carbon offset in question is based on actual GHG emissions reductions or, as is more frequently the case, some other form of offset project, for example those that sequester, destroy, or displace GHGs. Additionally, one standard metric that has emerged and appears to enjoy near universal application in quantifying the various types of carbon offsets is the “metric ton” of CO₂ (which uses CO₂ as a proxy for other GHGs). For an example of historical carbon offset values based on the metric ton, the Chicago Climate Exchange “Market Overview” is particularly informative. Chicago Climate Exchange, Market Overview <http://www.chicagoclimatex.com/market/data/daily.jsf> (last visited June 9, 2009). It should be kept in mind that the prices on the Chicago Climate Exchange are based on a number of factors, including speculation and profit-taking, which coalesce within a structured market much like familiar stock markets such as the New York Stock Exchange. This price-setting mechanism should be contrasted with prices derived from one-on-one carbon offset purchases and sales that occur outside of the market context and between and among

programs²⁵ and carbon taxes.²⁶ Within the context of conservation easement practice, the first two of the above options fit under the rubric of latent ancillary rights. Because carbon offset creation and marketing has been the first of such latent ancillary rights to be used in conjunction with conservation easements, this Article focuses on that particular anti-global warming strategy. That the sale of carbon offsets can be lucrative, and therefore worthy of consideration by the land trust community, is amply demonstrated by recent statistics. For example, voluntary carbon offset markets doubled in size in 2008. It is estimated that 123 million metric tons of carbon offsets were traded in 2008 at a value of \$705 million. The Chicago Climate Exchange alone tripled in 2008 with a volume of 69.2 million metric tons of carbon offsets with a market value of \$307 million.²⁷

C. Addressing Latent Ancillary Rights and Carbon Offsets in Conservation Easements

When negotiating and drafting a conservation easement covering forested lands today, one of the most important issues that must be considered is how to address the potential generation and sale of latent ancillary rights in the form of carbon offsets.²⁸ There are three choices: (1) ignore the issue and omit any language regarding offsets in the easement; (2) acknowledge carbon offsets and initially allocate them to the grantor; or (3) acknowledge carbon offsets and initially allocate them to the grantee. Regarding whether the carbon offsets should be initially allocated to the grantor or the grantee, there are as yet no laws, or even any customs or standard practices, governing this critical issue. Accordingly, in most conserva-

individual entities. In the latter example, prices are the result of negotiation as opposed to the more complex forces of market-based pricing. It should also be noted that carbon offsets are frequently used as “regulatory currency” in cap-and-trade programs, which are described in the following footnote.

25. Cap-and-trade programs differ from carbon offset programs in that they almost always involve control by a governmental entity. In their most basic form, cap-and-trade programs involve a governmental body setting a cap on carbon emissions for a particular industry, geographic area, or other definable collective. The cap will be based both on historical emissions, i.e., it will likely be a reduction of such historical emissions, and scientific recommendations based on the amount of carbon emissions reductions necessary to maintain atmospheric GHGs at a certain level. Within the pool of a cap-and-trade program’s participants, emissions credits, i.e., the right to emit specific amounts of GHGs, will be assigned to the participants based on their respective historical emissions. Once these allocations have been made, participants may choose to maintain their current emissions or even to increase them. Such participants must, however, purchase excess emissions “credits” (which credits may be in the form of carbon offsets that may in turn be based on metric tons of CO₂) from those other participants that have chosen to reduce their emissions and thus have excess carbon credits to sell.
26. Carbon taxes are self-explanatory. A carbon tax can be assessed against almost any imaginable carbon emission-generating entity or enterprise. Unlike carbon offset and cap-and-trade programs, they are always government-driven and mandatory. Global warming “realists” consider carbon taxes as the only truly effective financial means of curbing GHG emissions.
27. *Fortifying the Foundations: State of the Voluntary Carbon Markets 2009*, CLIMATE BIZ (2009), <http://www.climatebiz.com/resources/resource/state-voluntary-carbon-markets-2009> (last visited June 23, 2009).
28. Because many conservation easements protect forest lands, carbon offset marketers will begin to seek out the holders of the ancillary rights on such protected forest lands to purchase carbon offsets from them. In many instances, the purchase of carbon offset rights from such eased lands will raise the issue of “additionality,” which is addressed later in this Article.

tion easement negotiation and drafting scenarios, the question of who initially owns the carbon offsets is a deal point to be resolved as early as possible. Among other benefits, this practice allows appraisers to factor carbon offsets into their value calculations.²⁹

Once the original ownership of carbon offsets is determined, a possible next step is the sale of offsets to the other party.³⁰ This could occur with the grantee buying the offsets from the grantor, for example by increasing the price paid for the conservation easement. On the other hand, the grantor may wish to retain the carbon offsets, with an appropriate reduction in the purchase price paid by the grantee. In the case of a donated conservation easement, how appraisers value an easement with carbon offset potential remains unpredictable. Likewise, how the IRS will view valuation of carbon offsets looms unknown, especially since the donation of carbon offsets within the context of a conservation easement donation may substantially increase the donated value of the conservation easement.³¹

D. Addressing Latent Ancillary Rights and Carbon Offsets in Side Agreements

The prudent practitioner arguably should address carbon offsets in the conservation easement to avoid controversy later on. On the other hand, there are good arguments for addressing carbon offset issues in a side agreement rather than the conservation easement. For example, because car-

bon offset creation and trading are in a flux, and because the prices of carbon offsets can change rapidly, a side agreement that can be changed quickly, easily, and without formality or oversight represents a better vehicle for carbon offset negotiations and agreements than vastly more difficult to amend conservation easements. Also, side agreements can allow proprietary information and price terms to remain confidential, something conservation easements cannot do because they are recorded public documents. Additionally, despite the current popularity and burgeoning use of carbon offsets, it is possible that they may represent only a trend with a limited lifespan. Because of the risk that carbon offsets may be “here today, gone tomorrow,” it would be unwise to incorporate them in a conservation easement, which is a perpetual document. Regardless of whether carbon offsets are addressed in the conservation easement or in a side agreement, good negotiation and drafting practices assume sophisticated parties who have adequately assessed the potential carbon sequestration capacity of a contemplated conservation easement and the market value of such capacity if converted to carbon offsets or other carbon sequestration “products.”

E. Measuring and Marketing Carbon Offsets

One of the factors that makes allocation of latent ancillary rights such as carbon offsets such a difficult decision is the lack of information available regarding this new form of “eco-asset” and the possibly enormous challenges of “packaging” such assets so that they may be sold to individual buyers (e.g., an airline might purchase carbon offsets for the purpose of reselling the same carbon offsets to its passengers so that they may offset their individual carbon emissions from flying) or placed in markets where they can be bought and sold, much like stocks.³²

Given the complexity and lack of accumulated knowledge of carbon offset creation and allocation, both the grantor and grantee may be wise to retain a consultant who is capable of using scientific and forest management methodology to determine how many metric tons of carbon the site can sequester and for how long. Unfortunately, the measurement of carbon that can be offset by a given site requires scientific analysis limited by analytical gaps and conflicting theories.³³ For example, in some instances, not only will the carbon sequestration and storage properties of surface vegeta-

29. It is likely that current appraisal practices do not take into account value added by the possibility of marketing of carbon offsets or other latent ancillary rights because these markets are too new and the pricing mechanisms remain in a state of flux. Other factors contributing to the difficulty of appraising land from which carbon offsets may be generated are the lack of transparent transactions from which “comparables” can be created as well as the multiple-price drivers, for example carbon offset exchange markets such as the Chicago Climate Exchange.

30. The purchase and sale of carbon offsets among the parties to a conservation easement assumes the documentation of the existence of such offsets either in the conservation easement itself or in a side agreement; although, neither law nor conservation easement practice requires that such documentation precede the sale of carbon offsets.

31. The dollar value of carbon offsets can vary greatly. Factors that affect price include supply, demand, quality, location (of offsets), and “co-benefits.” Co-benefits are a form of secondary value that can arise from offset commodities being traded. For example, in a given purchase of carbon offsets from a forest carbon sequestration project, co-benefits might include preservation of species habitat and of species themselves as well as scenic vistas and recreational opportunities. Carbon offsets with co-benefits have been referred to as “gourmet carbon” in contrast to less valuable “commodity carbon” or “carbon a la carte.” See James L. Olmsted, *Carbon Dieting: Latent Ancillary Rights to Carbon Offsets in Conservation Easements*, 29 J. LAND RESOURCES & ENVTL. L. 121 (2009). As noted earlier, one means of tracking market-based carbon offset prices (as opposed to negotiated carbon offset prices) is to visit the Chicago Climate Exchange’s constantly updated table of volume and prices of carbon offsets traded on the exchange. Chicago Climate Exchange, Market Overview <http://www.chicagoclimatex.com/market/data/daily.jsf> (last visited June 9, 2009). More evidence that carbon offsets can be lucrative, and therefore demanding of consideration by the land trust community, is provided by the recent sale of carbon offsets derived from a conservation easement held by the Pacific Forest Trust on lands in the Van Eck Forest in California. Based on restricted logging practices imposed on the forest, the Pacific Forest Trust sold the carbon offsets generated by 2,200 acres of forest on the eased land for \$2 million. Margot Roosevelt, *California Forests Hold One Answer to Climate Change*, L.A. TIMES, June 1, 2009, <http://www.latimes.com/news/local/la-me-forests-carbon1-2009jun01,0,293391,full.story> (last visited June 9, 2009).

32. As previously noted, one such market already exists, the Chicago Climate Exchange or CCX, <http://www.chicagoclimatex.com/> (last visited June 11, 2009). The Regional Greenhouse Gas Initiative (RGGI) and the California Climate Action Registry (CCAR) may also be in the process of either creating carbon trading markets or creating the carbon offsets to be bought and sold through national carbon markets. See *Regional Greenhouse Gas Initiative* at http://www.rggi.org/rggi/about_rggi (last visited June 11, 2009) and *California Climate Action Registry* at <http://www.climateregistry.org/> (last visited June 11, 2009). Note that new players are appearing on the field; for example, The Climate Registry, which is described by CCAR as “[a] new GHG registry that serves all of North America [and is] our sister organization and based upon the work of the California Registry.” *Id.*

33. BRANDON SCARBOROUGH, *TRADING FOREST CARBON: A PANACEA OR PIPE DREAM TO ADDRESS CLIMATE CHANGE* (Roger Meinert ed., 2007) (a well-informed, thoughtful, and remarkably candid discussion of forest-based carbon trading published by the Property & Environment Research Center), <http://www.perc.org/articles/article895.php> (last visited June 12, 2009).

tion such as trees be considered, but the less well understood carbon sequestration and storage characteristics of the understory and even the soil as well. Even measuring the carbon sequestration and storage capacities of individual trees can be a remarkably complex task because trees capture and sequester carbon at different rates over their lifespans and may even emit carbon as they reach maturation.

As just noted, the measurement, verification, and certification necessary to create a marketable “product” from carbon offsets present considerable scientific and economic challenges. Additionally, after establishing the potential carbon sequestration capacity of a site, the seller (grantee or grantor) must find an entity that buys the offsets, find a “middle-man” to market the offsets, or place the offsets on an established market. Because of the complexity of carbon offset markets, a full discussion is beyond the ambit of this Article.³⁴ On the other hand, the transfer of such offsets to individual purchasers can be quite simple. For example, the documents currently being used to transfer carbon offsets between their creators and their purchasers are nothing more novel than purchase and sale agreements employing the usual time frames, risk allocations, and price terms.

F. The Additionality Trap

“Additionality” is a requirement in almost every carbon offset transaction. It refers to the mandate that the offsets would not have been generated “but for” the offset project and, therefore, are not “business as usual.”³⁵ Within the context of conservation easement drafting, additionality problems can arise when an easement protects a conservation value that could also be used as the basis for carbon offsets. For example, an easement on forested land could prohibit development or logging of the eased land. The result of this provision is the preservation of the forest or “avoided deforestation.” Next, imagine that a carbon offset reseller seeks to purchase carbon offsets based on the carbon sequestration properties of the preserved forest. Because the avoided defor-

estation was the result of the conservation easement, and not because of a carbon offset project, it cannot be said that the avoided deforestation would not have happened “but for” the carbon offset project and, therefore, represents “additionality” as opposed to “business as usual.”

One solution to the problem just presented is to change the forest management plan in an existing conservation easement so that forested lands sequester more carbon. In such a case, the change in the forest management plan, and not the placement of an easement avoiding deforestation by prohibiting development, creates the necessary additionality. Because of the potential inadvertent loss of the ability to create carbon offsets from land under a conservation easement by the destruction of additionality, this issue must be thoroughly vetted and discussed by the attorney, the client, and, hopefully, consultants familiar with this and other carbon offset issues.

G. Appraisal Complexities and Undesirable Asymmetrical Outcomes

Even when land subject to an appraisal for conservation easement purposes can be designated as “ordinary” in comparison to other properties, the appraisal process for the easement itself remains complex. Current conservation easement appraisal practices consider variables including zoning and entitlements associated with a property, site constraints, the current prevailing political attitude toward growth and development, infrastructure availability, housing needs, comparable values, and location, all of which are used in determining the highest and best use of the property from which the ultimate appraised value can be extrapolated. In a nutshell, the conservation easement appraisal process additionally involves comparing the value of the land before the conservation easement is imposed with the value of the land after the conservation easement is imposed. The difference in value between the “before” value and the “after” value is the value of the conservation easement.³⁶

Credible appraisals remain critical and present the potential for asymmetrical results between the grantor and grantee. If the appraiser is sophisticated and takes carbon offsets into consideration, this should increase the appraised value of a conservation easement. In a purchase and sale scenario, the grantee should own the carbon offsets because it paid a higher value for them. On the other, hand, should the appraiser fail to include carbon offsets in the conservation easement appraisal, the offsets should remain with the grantor landowner.

The asymmetry is revealed in the donated conservation easement scenario. Here, if the appraiser includes carbon offsets in the appraisal process, and thereby increases the value of the conservation easement, the grantor landowner will nevertheless want to retain the offsets rather than donating them to the grantee. This will be true even if it involves reducing the value of the donated easement. This is because the value

34. For a sample of scholarly works addressing carbon and emissions trading, see the following: RICARDO BAYON ET AL., *VOLUNTARY CARBON MARKETS: AN INTERNATIONAL BUSINESS GUIDE TO WHAT THEY ARE AND HOW THEY WORK* (2009); NATHANIEL O. KEOHANE & SHEILA M. OLMSTEAD, *MARKETS AND THE ENVIRONMENT* (2007); SONIA LABATT & RODNEY R. WHITE, *CARBON FINANCE: THE FINANCIAL IMPLICATIONS OF CLIMATE CHANGE* (2007); *CLIMATE CHANGE AND CARBON MARKETS: A HANDBOOK OF EMISSIONS REDUCTION MECHANISMS* (Farhana Yamin ed., 2006); THOMAS H. TIETENBERG, *EMISSIONS TRADING: PRINCIPLES AND PRACTICE* (2d ed. 2006); TOM JAMES & PETER C. FUSARO, *ENERGY & EMISSIONS MARKETS: COLLISION OR CONVERGENCE?* (2006); PETER C. FUSARO & MARION YUEN, *GREEN TRADING MARKETS: DEVELOPING THE SECOND WAVE* (2005).

35. See *Guide, supra* note 8 (<http://www.cleanair-coolplanet.org/Consumers-GuidetoCarbonOffsets.pdf>) (last visited June 12, 2009). Two other fundamental requirements of carbon offset creation are “permanence” and “leakage avoidance.” Permanence refers to the offset project’s ability to guarantee GHG mitigation over a stated period. Conservation easements are an ideal legal mechanism for ensuring permanence because of their perpetual nature. Leakage avoidance means that an offset project must not result in the transfer of emissions to another location outside of the offset project area. For example, if a conservation easement avoids deforestation by prohibiting development or logging in one area, leakage occurs if the prohibited development or logging operation simply results in deforestation elsewhere. BAYON ET AL., *supra* note 34, at 21.

36. McLaughlin, *supra* note 9, at 491.

of the deduction for the offsets will represent at most 35% of their appraised value under current federal income tax laws making retention and sale of the offsets more lucrative than donating them. In the opposite scenario, where the appraiser fails to include the carbon offsets in the conservation easement value, again the offsets should arguably remain with the landowner. This outcome avoids the landowner giving up valuable offset rights without compensation in the form of an increased tax deduction. Thus, the possible treatment of carbon offsets in conservation easement transactions creates an asymmetry where out of four possible outcomes the grantee is likely to end up with the carbon offsets only when it pays for them in a purchase and sale scenario. While no easy solution presents itself, this is a socially undesirable result as grantee land trusts are typically nonprofit corporations subsidized by the public. The better result would be for the publicly subsidized nonprofit land trusts to be the beneficiaries of the carbon offsets of eased lands in the majority of circumstances.

III. Conclusion

Global warming and climate change will transport us to a new, unpredictable, and dangerous world. For land trusts acquiring conservation easements, the transactions will have

many more moving parts and many more risks of dealing inappropriately with an unknown future made menacing by the specter of catastrophic global warming. This brief Article highlights two of the many new considerations land trusts will face: avoiding premature termination of conservation easements; and capturing the value of latent ancillary rights. This is obviously not an ending point to such discussions. Just as our planet experiences one new tipping point after another, so will the land trust community and the attorneys that serve it experience new and constantly changing challenges and opportunities. Now is the time to begin anticipating what those challenges and opportunities may be and working together to find new ways to address them. It is not overstatement to suggest that not only should global warming issues be incorporated in the scholarship of conservation easement and land trust practice such as that represented by this Article, they must be made the centerpiece of the conferences and workshops through which members of the land trust community communicate their hard-earned collective knowledge. It is only in this way that the land trust community can meet the challenges of conservation easement drafting in the age of global warming and become an effective part of the fight to save our planet and all those species that inhabit it, including ourselves.