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## **Evolving Conservation Easement Markets in the West**

**Dana L. Hoag, Chris Bastian, Catherine Keske-Handley, Don McLeod, and Andrew Marshall<sup>1</sup>**

### **Introduction**

Why do farmers and ranchers donate conservation easements? No one really knows because nearly all of the literature about conservation easements focuses on the people and entities that buy easements rather than on the landholders that sell them (Marshall 2002). Only a handful of studies have addressed sellers' motives and no empirical studies have looked at both buyer and seller motives simultaneously.<sup>2</sup> How can markets be efficient when there is more information about buyers than sellers? We are learning a great deal from the literature about why a land trust forms and what it wants to purchase, but we know very little about why one landowner sells an easement while another just gives it away for free.

Conservation easements (CEs) are a very popular way to create a market for the amenities that private lands have to offer, such as open space and wildlife habitat. A CE is an agreement that extinguishes the current (and typically all future) landowners' development rights for the parcel in question. The transaction is usually brokered by another entity, which we will simply call a trust. Trusts are supported by private donations. They are often assisted by an array of government funding, which is provided since land trusts protect public goods on private lands. With few exceptions, land trusts are 501(c)(3) organizations, which allow the donors to qualify for tax benefits.

It seems obvious that public policy to fund CEs would benefit both the community and landowners. However, there are many ways that the market or the government can corrupt social or private objectives. Many studies have looked at market efficiency related to society's willingness to pay (WTP) for CEs. We are launching a study that will focus simultaneously on WTP and on landowners' willingness to accept (WTA) a perpetual conservation easement. By looking at both the seller and buyer simultaneously, we can begin to understand how each values the many attributes that a given parcel of land can provide and presumably improve future markets. For simplicity, we distinguish between how buyers and sellers value these attributes. For buyers, we use the term public interest values (PIVs) to reflect the public's interest in enjoying the amenities a private parcel has to offer. For sellers, we use the term private amenity rents (PARs) to describe those attributes that generate rents to landholders.

To return to our question about why some landowners donate CEs, the answer is to protect PARs. Landholders place values on the same things that trusts are trying to purchase, and in the case of a donation, are willing to provide the "public" good at their own expense. Landholders do not place easements necessarily for the public good, but the outcome is the same regardless because of the complementarity between private and social interests. Ignoring PARs will lead to inefficient markets. A farmer, for example, might donate what he or she could have sold. Likewise, a trust might pay more than required by a competitive market, especially when they purchase easements that would have been donated anyway.

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<sup>1</sup> Hoag, Keske-Handley, and Marshall are with the Department of Agricultural and Resource Economics, Colorado State University. Bastian and McLeod are with the Department of Agricultural and Applied Economics, University of Wyoming.

<sup>2</sup> In the interest of brevity and because so many before us have already summarized the literature, we refer anyone interested in details that we do not cite to one of the following: Gustanski and Squires 2000; Marshall 2002; Hellerstein et al. 2002; or NRCRD 2004).

Consider for example a land parcel that has a market value of \$10 million, but would be worth only \$2 million based on its agricultural productivity. A trust would have to pay \$8 million for the development rights if a landowner's PAR = 0; that is, if the owner placed no value on the amenities as such, he or she would have to be fully compensated for the lost value from an easement that restricted development. On the other hand, we can observe that for many people PAR is not zero because they donate easements without fully recapturing the depreciated value through tax breaks. Even people that sell their easements are usually not fully compensated (Hoag et al. 2002)<sup>3</sup>. At the extreme, the PAR can exceed \$8 million, in which case a landowner would be willing to place an easement without any compensation. Depending on the value of the PAR, a trust should expect to pay between 0 and \$8 million for an easement. However, markets cannot be efficient if the PIVs are more readily known than PARs. Either the buyer will overpay or the seller will accept too little.

Our intention is to demonstrate that PARs should be explicitly accounted for in CE markets. CEs are particularly important in the West and there are limited funds to purchase them. It is important to improve efficiency wherever possible. CE markets need to evolve in the future to include PARs as part of an overall solution to make CEs socially efficient. We proceed with a brief discussion about CEs and the CE market literature. We present a simple illustration to demonstrate the impact of ignoring PARs and conclude by prescribing more research about PARs and their importance to CE markets.

### **Growth in Demand for Conservation Easements in the West**

Growth and development in the West is a concern because it threatens values like wide open spaces that draw people to the West in the first place. Utah, Colorado, and Idaho experienced population growth rates of 28 to 31 percent between 1990 and 2000 (U.S. Department of Commerce, 2001). In particular, previously remote counties containing national forests, national parks, mountains, and lakes are experiencing surges in population, as are counties with a more traditional agricultural/ranching based economy. Selected mountain counties in Wyoming and Colorado grew between 15.1 and 39.8 percent in the same time period. Individuals moving into western wilderness counties tend to be better educated, have professional occupations, higher incomes, have lived previously in more populated areas and are seeking amenities such as improved climate, recreation, scenery, and environmental quality (Rudzitis and Johansen 1989).

Conservation easements are the fastest growing means of land preservation. A comprehensive survey conducted in 2003 on land preservation indicated that nationally nearly 9.4 million acres of land were under conservation easements (Land Trust Alliance, [http://www.lta.org/census/census\\_tables.htm](http://www.lta.org/census/census_tables.htm)). Easements are particularly important in the West given our concerns about growth and development. The Rocky Mountain region, for example, has had a growing flow of legislation that facilitates conservation easements during the past five years. A Resources for the Future study notes that the southwestern states of Arizona, Colorado, New Mexico, and Utah have increased their protected land by more than 1,600% in the past decade (Albers, Ando, and Kaffine 2004).

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<sup>3</sup> Compensation for a donation can be very complicated, depending mostly on state tax laws, donor income, and clever lawyers. For example, in Colorado, a donor would be eligible for a Federal deduction of the depreciated value and a state tax credit of up to \$260,000. Tax liability, however, usually limits tax savings. Federal exemptions can be carried over but are subject to a limit based on adjusted gross income. In Colorado, the credit can be sold and therefore retained if a donor lacks a sufficient amount of tax liability. Furthermore, the Joint Committee on Taxation is looking into abuses of easements for tax savings and has proposed that substantial limits be imposed (Options to improve tax compliance and Reform tax expenditures. Report No. JCS-02-05, Joint Committee On Taxation, January 27, 2005). The point is, tax savings may offset some financial losses for donations, but landowners do not recover all of their losses. Therefore, a donor is financing some of the public good value when they donate an easement.

### **Conservation Easement Markets**

Open markets provide efficient quantities of privately demanded goods; however, private lands provide an array of amenities with public good attributes that are typically unpriced in land markets. Agricultural producers face two pressures that can create disincentives to provide public amenities such as open space. Coyler (1998) characterizes these pressures as the push caused by unfavorable incomes in agriculture leading farmers to quit operations and a pull caused by rising land values due to development causing producers to sell land and realize large capital gains. This failure by normal market transactions results in socially inefficient patterns of resource use. The inability of the market to compensate landowners for producing publicly demanded amenities creates an environment that causes excessive conversion of agricultural lands to residential development. This effectively drives a wedge between desired (optimal) levels and actual quantities of agricultural lands and the amenities they provide. Conservation easements provide a way to market non-market amenities, but inefficiencies can still be manifested in the market structure when the market is very thin (Fausold and Lilieholm 1999; Anderson and King 2004).

Economic literature about CEs has emphasized the public's general preferences and potential non-market values for desired amenities (Hellerstein et al. 2002) and on market failures (Anderson and King 2004). Economic literature, however, suggests that agricultural land also derives part of its value from an additional non-consumptive use rent for the landowners (i.e., PARs). Stewart and Libby (1997) advocate that landowners derive an intrinsic enjoyment from the location or quality of land. This type of value represents a non-market or personal value that landowners claim as attractive for agricultural land ownership. In addition, Rowe, Bartlett, and Swanson (2001) show that personal motivations ranked much higher than market factors (including non-agricultural rents) for maintaining agricultural land-uses in two rural Colorado counties.

In a Northeastern U.S. landowner conservation easement survey, Elconin and Luzadis (1998) inquired about donor motivation and satisfaction from conservation easement placement. They concluded that motivation for placement was primarily triggered by personal attachment to the land, sense of altruism, and commitment to stewardship. Their lowest levels of satisfaction were observed in tax and financial matters. The authors did note that successive or second generation landowners were less satisfied and would change their conservation easement if given the opportunity. A Colorado landowner study by Marshall, Hoag, and Seidl (2002) found similar results. A targeted sample of Colorado landowners was surveyed regarding their satisfaction with conservation easement placement. Results indicated that "maintaining agricultural land-use" was the most realized goal. Alternatively, expected financial goals were the least realized in the end. Thus, motivations for land protection stemmed more from tenure with less regard to financial improvements. Landowners that considered but chose not to place a conservation easement also cited inadequate financial compensation as their primary reason for not placing a conservation easement.

Despite the importance of seller values, the research community prefers to focus on CE buyers as evidenced by these typical titles: "Farmland Protection: The Role of Public Preferences for Rural Amenities" (Hellerstein et al. 2002) and "What the Public Values about Farm and Ranch Land" (NRCRD 2004). Furthermore, individual studies about market efficiency also appear to place less emphasis on sellers. For example, Anderson and King (2004) looked at efficiency in an experimental setting. They found that private incentives alone predict CE decisions because landowners in the game did not value public goods. Yet they did not use real landowners. Participants that represented landowners were given information about taxes, future opportunity to sell into development or other uses, agricultural uses, and two types of altruistic uses, one providing natural amenities to other community members and the other to avoid shifting a tax burden to other community members. The assumption was made explicit that PAR amenities are of zero value to the landowners. Participants in the experiment could not possibly know how much value an actual landowner might place on agricultural heritage and other PARs because these are personal matters that are deeply tied to a person's bond to a particular land parcel.

Fausold and Lilieholm (1999) suggest that appraisers only have a vague guess about the actual value of an easement and can significantly under- or over-estimate the “true” market value. Part of the problem with the thin market for CEs is that both the buyer and seller value multiple attributes for the same piece of property in different ways. In the case of an economic use, the highest and best use wins out. In the case of PIVs and PARs, different management scenarios can provide varying amounts of each attribute at the same time. In theory, a market would be created for the attributes, not bundles that accompany the land and management system. In practice, however, communication in the market is poorly developed, making it difficult to provide information about multiple property attributes to both buyers and sellers in a meaningful way (NRCRD 2004). It is not uncommon to hear a producer talk about placing an easement for agricultural preservation to someone that thinks they are buying open space. They are not always the same thing, leaving plenty of room for future conflicts. Moreover, the CE market can be characterized as having high search costs for both buyers and sellers, further exacerbating the market’s ability to discover the appropriate amenity values.

**An Illustration**

Surveys suggest that the public has a variety of reasons for protecting farmland (Hellerstein et al. 2002) and open space. Table 1 summarizes PIVs protected by land trusts in 2000. Two observations should be immediate. First, many of these PIVs overlap with each other and second many overlap with private amenity values.

**Table 1.** PIVs protected by U.S. Land Trusts.

	% of Land Trusts Protecting		% of Land Trusts Protecting
<b>Land PIVs Protected</b>		<b>Land PIVs Protected</b>	
Wildlife habitat	76.6	Historic and cultural	46.2
Forests	70.5	River corridors	35.3
Open space	69.5	Ranch land	34.3
Watersheds	64.3	Mountains	34.3
Wetlands	60.4	Hillsides	33.8
Scenic views and roads	55.7	Lakes	32.9
Ecosystems	55.2	Urban Land	28.9
Farms	51.0	Prairies	27.6
Greenways	50.3	Archeological sites	25.7
Recreation and trails	49.0	Deserts	15.8

Source: Adapted from J.A. Gustanski, Land Trust Interviews (1996-98), as quoted in Gustanski and Squires 2000 (p. 21).

If a land trust had the tools to do so, it would differentiate all of the attributes and not pay twice for any that overlap. But this would be impossible in practice. So instead, trusts seek out the attributes they are interested in and ignore the variables that are irrelevant to them. Of course, these irrelevant variables might be very relevant to someone else. Marshall, Hoag, and Seidl (2002) asked owners of land parcels that had conservation easements on them to identify what they thought the public was buying. Open space was significant to all of the landowners. However, these landowners put a very high value on protecting agricultural values and relatively low value on providing endangered species habitat, which is opposite of how the public would probably weight these amenities. When asked about what they wanted to protect, the landowners ranked agricultural viability above improving financial position or reducing estate taxes. Interestingly, many but not all of the PIVs that land trusts usually seek to purchase were not fully maintained by the easements, demonstrating that PIVs and PARs do

not perfectly overlap. When individuals that had entered into an easement were asked about what had been achieved by their easements, all indicated that land use (agricultural protection) was maintained. However, open space was significantly protected on just 80 percent of the properties in the survey and the environment improved on only 70 percent.

The discussion above is meant to demonstrate that every land parcel and management practice produces PIVs and PARs. Therefore, a producer may be willing to sell an easement, or donate it, to “purchase” his or her PARs in perpetuity. Some of these amenities are public goods that would be supplied without government or other financial incentives.

Consider a landowner's decision to convert farmland to non-farm use. Land is held in an agrarian state until another higher valued use like urban development overcomes current agrarian rents. Basic economic and appraisal literature (e.g., Plantinga and Miller 2001; Tegene, Weibe, and Kuhn 1999; and Capozza and Sick 1994) states that today's fee-simple price of convertible agricultural land equals the capitalized and discounted agricultural rents up to an optimal date of conversion plus thereafter capitalized and discounted urban rents, less a one-time cost of conversion. This implies that, if a landowner were to place an easement extinguishing the right to develop his or her property, the only remaining value would be the pure capitalized agricultural value. However, land with such restrictions is routinely sold at prices higher than justified by agricultural productivity (Hoag et al. 2002). Part of agricultural land's value is generated from a non-market rent component that creates agricultural land-use value by the presence of its own natural amenities or some combination of personal factors that a landowner captures with private agricultural land ownership (PARs). This non-market rent holds agricultural land as attractive to own, control, or gain value from the land itself. As such the market price of agricultural land does not reflect a landowner's reservation price containing any non-market rent component.

In summary, the fee-simple market price of agricultural land today incorporates four components: (i) the present value of captured agricultural rents up to conversion and lost thereafter, (ii) the present value of capitalized PARs up to conversion and lost thereafter, (iii) the present value of capitalized future urban rents after conversion and (iv) the present value of constant capital conversion costs incurred with urban use. Finally, since market-based appraisals are unable to distinguish the PAR component, conventional appraisal estimates for conservation easement valuation are overstated in the presence of any landowner capitalized PAR.

### **Concluding Comments**

The market for conservation easements can be characterized as those wishing to purchase development rights, usually agents representing organizations such as land trusts, and those wishing to sell development rights (landowners) agreeing on easement attributes and price. There is no organized market exchange where many buyers and sellers can discover prices for conservation easements, as is the case with many agricultural products. Thus, price discovery occurs in a private negotiation. This type of market institution creates potential risks and costs for both buyers and sellers as compared to other trading institutions. As we have demonstrated above, the potential for overestimating potential amenity rents for landowners using traditional appraisal techniques is high. Specifically, we have shown that landowners' private amenity rents (PARs) partially overlap with public interest values (PIVs) on land that has multiple amenities. Ignoring the PARs could overvalue the easement and lead trusts to overpay for easements, or for producers to underprice easements placed on their land. It will also lead the market to prematurely predict conversion.

As the demand for amenities provided by conservation easements grows, so do the opportunities for economists to contribute to the efficiency of this evolving market. An area for making the greatest contributions right now seems to be studying the seller side of the market. Particularly, research regarding landowners' willingness to accept values for public amenities provision, preferences for easement program attributes, and preferences for benefit vehicles such as tax breaks versus outright

payment would all make a significant contribution. Another area that seems fruitful is that of understanding intermediaries' (such as land trusts) preferences in purchasing and providing conservation easements. Information provided about the market for easements could reduce search costs and matching risks, improve bargaining positions of sellers, and increase the overall efficiency of conservation easement markets.

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