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Tourists' and Residents' Values for Maintaining Working Landscapes of the 'Old West'

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Abstract

The value of agricultural landscapes to tourists and local residents is not captured in the marketplace. Landowners provide stewardship over these valuable landscape attributes, but do not receive any 'uncaptured' value. Through real estate markets, it is easy to reveal the value of converting landscapes, but less easy to understand the value of not converting them. Redistributive policies have the potential to provide incentives to landowners to act on behalf of these other stakeholders by lowering the opportunity cost of (raising the returns to) open lands stewardship. This article will examine this issue for a rural county in Colorado. Tourist and resident demographics and travel behavior will be identified. The value of ranch open space that currently is not reflected in the market will be estimated and further discussed in terms of its implications for the local economy. Policy implications for the local decision makers to capture this currently 'uncaptured' value of ranch open space will be briefly explored.

Introduction

Imagine a typical western United States rural landscape of a pasture with roaming cattle and the Rocky Mountains as a backdrop. This landscape holds different values to different people. To the landowner, the main importance is the market value of the cattle and the value of the land; it may be his or her way of life. To a local resident, it is an open vista, distinct from a more urban or exurban view of houses and buildings, fish and wildlife habitat, a physical separator among neighboring communities, and/or a contributor to water and air quality that may affect their home value, their recreational opportunities, and their quality of life. To a tourist or visitor, the 'Old West' landscape may hold similar valuable attributes as to a resident (save contributions to home values), as many residents in these communities were once short term vacation visitors.

If the rural landowner decided it was in his or her best interests to end the cattle operation and sell off the land to a local developer, how would it impact the local economy? How might private land use decisions influence community economic vitality? It is easy to compare the market values of the cattle operation with the new urban development operation, whether it is additional housing or retail shops or services. What about the other residents and visitors to the area? Residents no longer enjoy unfettered views on their drive to work, but there may be more shopping opportunities, and their home value may be affected (positively or negatively). Tourists visits and expenditures may be affected (again, positively or negatively) as additional housing and shops change the nature of the tourism experience. The values of these goods, services, attributes and experiences that are not reflected in market prices (the consumer's surplus) will be greater for nature based tourism and outdoor experiences than for typical goods and services such as clothing and food. Private land use decisions take into account private benefits and costs and are, largely, reflected directly in the marketplace. However, the broader public benefits and costs of private land use decisions are only indirectly reflected in markets. As a result, unlike many common market transactions, private land use decisions may result in socially undesirable changes in the rural landscape when private and public benefits and costs are not equivalent.

The total economic value of a good or service is the sum of its consumptive and nonconsumptive use values and its nonuse values. The consumptive use value is the value associated with consuming the good or service and can be revealed through market prices. Most traded goods (e.g., food, clothing) have only consumptive use values. Nonconsumptive use values are the values associated with personally experiencing the good or service without using it up (e.g. hiking, viewing or swimming). Nonuse values are not derived from personal experience with the good or service in question. Rather, knowing the good exists (existence value), having the option to access it in the future (option value) and having the good or service available for future generations (bequest value) are expressions of nonuse values. While use values can be reflected in the market, such as the value of the landowner's cattle, there is not an efficient market for goods and services that feature nonconsumptive use (e.g. residents' and tourists' value of viewing the landscape) or nonuse values; the market tends to undervalue, and therefore underprovided, these goods. In order to reveal significant nonconsumptive use and nonuse values, indirect valuation methods (e.g., hedonic property or travel cost methods) or nonmarket valuation methods (e.g., contingent valuation or contingent behavior methods) should be employed (Loomis and Walsh, 1997)¹. This study attempts to capture a portion of the total economic value, the residents' and tourists' nonconsumptive use values, attributable to rural landscapes.

The quality and abundance of natural amenities, such as the scenic features of rural landscapes, are highly correlated with population and employment growth, popular with retirees and recreationists and they even shape agriculture (McGranahan and Sullivan, 2005²; Whitener and McGranahan, 2003³; McGranahan, 1999⁴; Beale and Johnson, 1998⁵). Ranch open space, or working landscapes, contributes to the vacation experience of tourists (Ellingson, 2007⁶; Rosenberger and Walsh, 1997⁷; Orens *et al.*, 2006⁸; Orens and Seidl, 2008⁹) and to the quality of life of residents (Magnan and Seidl, 2004¹⁰; Magnan *et al.* 2005¹¹; Rosenberger and Loomis, 2001¹²). These public good attributes of working landscapes are provided, without external compensation, through the stewardship of landowners, who also presumably benefit from these features (Turner *et al.*, 1988)¹³. There is growing recognition that protecting natural areas, enhancing tourism opportunities or providing recreational experiences are actions tightly intertwined with quality of life goals

that are distinct from, and often conflict with, economic development goals (McCool and Patterson, 2000)¹⁴. The relationship between natural amenities and economic development is a critical issue for rural areas, especially retirement and tourism areas, because of the impact the consumers' values have on the local economy (Green, 2001)¹⁵.

Since markets accurately reflect the private and social value of many goods and services, they tend to undervalue natural amenity driven tourism and outdoor recreation experiences. The failure of markets to account for amenity benefits may lend support for public policy to protect rural landscapes (Bergstrom *et al.*, 1985)¹⁶. Failure to capture the nonconsumptive use values associated with landscapes underestimates the influence of local natural attributes on the local economy, which could lead to significantly different policy decisions. Policies that enhance the quality of life can attract residents with the financial wherewithal to choose where they live, in turn stimulating economic development within the community (Nelson, 1999)¹⁷. Tourist spending produces additional employment and opportunities for existing residents, which also stimulates the economic development of the area (Beale and Johnson, 1998)¹⁸. High levels of natural amenities generate growth which can, in turn, create pressure to destroy the very amenities that drew people in the first place. Protecting land resources and its associated valuable attributes from higher density uses necessarily restricts the availability of developable property to accommodate population growth pressures (Green, 2001)¹⁹. This double edged sword in the community welfare enhancing or debilitating (economic development) effect of natural resource management remains a fruitful and relatively unexplored avenue of economic inquiry (Marcouiller and Clendenning, 2005)²⁰.

This paper uses the results of two recent surveys as a foundation for an assessment of the welfare effects of potentially converting rangeland open space into urban uses. The relevant stakeholder groups are defined as non-landowning residents, landowning residents, and summer tourists. A description of Routt County, Colorado, the study site, is followed by the research methodology and a descriptive analysis of the two surveys, the summer tourists (Ellingson, 2007)²¹ and residents (Magnan, 2005)²². Next is a comparison of values, the resulting economic impact and the attitudes towards a potential conversion of rangeland open space to urban uses. The final section summarizes the potential policy implications of the results and concludes.

Study Site: Routt County, Colorado

Steamboat Springs, the county seat of Routt County, Colorado is a unique community and tourist destination, possessing a distinctive Rocky Mountain landscape, plentiful outdoor recreation, culinary and cultural opportunities and a long tradition of the "Old West." Cattle ranching and its related industries has long been a central feature of Routt County's private land use and community culture. Routt County is located in northwestern Colorado; rural Wyoming is the county's northern neighbor and it is approximately 170 miles and several mountain passes northwest from the Denver metropolitan area.

The combination of natural amenities and cultural traditions makes Routt County one of the fastest growing and wealthiest counties in the United States. Due to its location in the Rocky Mountains, Routt County draws people nationwide for retirement and recreation, while most communities with high levels of natural amenities attract people from more limited distances (McGranahan, 1999)²³. People whose ability to earn income is not tied to a particular location (e.g. self-employment, 'telecommuters,' and, so called, 'lone eagles') and retirees are increasingly more highly concentrated in high natural amenity areas that improve their

quality of life including a number of communities in the Rocky Mountains (McGranahan and Sullivan, 2005²⁴; Whitener and McGranahan, 2003²⁵; Nelson, 1999²⁶). However, economic growth is not without its challenges. One of the growth related concerns of county residents is the conversion of privately held farms and ranches on large tracts of land into rural residential properties, commonly called “ranchettes,” “hobby farms” or, the more derisive, “McMansions” or “starter castles” in the local vernacular when the residences are particularly large (Magnan *et al.*, 2005)²⁷.

In recognition of the contribution of working landscapes to the well being of the community, Routt County implemented a voluntary purchase of development rights program in order to help to preserve this traditional lifestyle in the county's vast valleys. In 1995, Routt residents passed a referendum to raise property taxes one mill for ten years to protect agricultural lands and natural areas. In 1996, that tax generated nearly \$400,000 and by 1999 the one mill levy was worth some \$748,000 to the program. Over the ten year life of the original program, the tax will have raised an estimated \$6 million for the preservation of rural lands in the county (Magnan, *et al.*, 2005)²⁸. In 2007, the purchase of development rights budget was \$1.2 million per year with 3 % allocated to cover administrative expenses.

Colorado has a highly decentralized tax revenue generation structure that allows for more freedom of how local governments collect taxes. Due to this structure, the combination of state and local taxes are among the lowest in the nation, while local taxes are among the highest (Greenwood and Brown, undated²⁹; Magnan and Seidl, 2004³⁰). Although the county government has a variety of tools at its disposal (e.g., fee simple purchase, zoning), it has pursued a policy to purchase (or accept donation of) conservation easements or development rights, from local landowners. The right to develop land can be separated from the right to own and use the land by placing such an easement against the property. In a parallel fashion, local, regional and national private non-profit organizations (often called land trusts or conservancies) have participated in the purchase of development rights or the outright purchase of properties and donation of the development rights of agricultural lands in the county. Currently, 55,000 acres of agricultural land are held under conservation easements in Routt County.

Landowners and residents of Routt County benefit from the local protection of ranch open space, but what remains unclear is to the extent in which visitors to Routt County appreciate the working landscape attributes of the region. Moreover, if ranch open space contributes to the tourism experience, then ranchers and the broader community may be subsidizing the local tourism industry through their land stewardship and land conservation policy.

Methodology

Economic values and impacts are derived from the results of two recent surveys: summer tourists (Ellingson, 2007)³¹ and residents (Magnan, 2005)³². These surveys queried respondents regarding their preferences for Routt County working lands, their motivations for these preferences, and demographic information. The purpose of the tourist and resident surveys for 2005 was to estimate the value of preserving open space in order to establish whether there was a positive return on investment to the voluntary purchase of development rights program, and therefore, whether it should continue. If the value of open space to the community (plus tourists) does not exceed the cost of the voluntary purchase of development rights program to local people (plus tourists), then it would be beneficial for the county to allow additional higher density development within the Steamboat Springs area. Clearly,

establishing which stakeholder groups have standing in these calculations and the distribution of costs and benefits among the relevant stakeholder groups provide an important context from which alternative taxation and land use policies can be explored.

The visitors' survey represents summer tourists to Routt County, intercepted, via stratified random sample, throughout Routt County from early July through mid September 2005. Survey collection areas were equally distributed among three main locations: the airport (32.3 %), the visitor center at Steamboat Lake (28.8 %) and locations around the town of Steamboat Springs (38.9 %). The survey crew consisted of Colorado State University graduate students, who were visibly identifiable as such. A total of 420 tourist surveys were collected from a four page survey instrument that took tourists approximately 15 minutes to complete. Respondents were asked about their trip activities, preferences about natural and man-made assets, reasons for maintaining open space, length of their trip and general demographic questions (Ellingson, 2007)³³. The resident surveys were sent to 1,074 potential respondents from August to October 2004. A total of 459 surveys were returned after three mailings (survey, postcard, survey), resulting in a 44 % response rate. The resident survey instrument precisely paralleled the tourist survey and was four pages and 23 questions in length (Magnan, 2005)³⁴.

Respondents were asked to predict their spending and/or visitation behavior contingent upon reductions in the quantity of local ranch working landscapes. The contingent valuation questions were couched in terms of a willingness to pay to avoid the change. Responses to the valuation questions were used to derive a mean willingness to pay and total consumers surplus associated with the nonconsumptive use value of each stakeholder group to maintain the current quantity and quality of ranch working landscapes. Mean values were extrapolated to represent the total values of the summer tourist population and the resident population of Routt County. Respondents were asked to rate how natural and man-made assets contributed to their enjoyment of living and vacationing in Steamboat Springs in order to better understand the underlying motivations for respondents' preferences. The rating was based on a nine point Likert scale where nine indicates the asset strongly contributes, five is a neutral response, and one indicates the asset strongly detracts from their enjoyment of Steamboat Springs and broader Routt County.

Descriptive Analysis

Summer Tourists' Demographics

Respondents were asked a number of socio-demographic questions, including permanent residence, in order to establish a typical summer tourist profile and to provide a screening mechanism to verify the visitor status of our sample.

Of the 420 survey respondents, 53% were male and 47% were female. The average age of a Routt County tourist was approximately 45 years old. Nearly 75% of respondents had earned at least a bachelor's degree, with over half of this group having received a master's or professional degree (39% of total respondents). The majority of the respondents are employed outside of their homes (80.6%), while 6.6% of the respondents work in their home, 10.8% are retired and 2.1% are unemployed. The mean and median number of income earners per household during 2004 is 1.7 and 2, respectively, typical of a US household (Ellingson, 2007)³⁵.

The mean annual household income range was \$100,000 to \$129,999, with approximately 60% of Routt County tourists earning at least \$100,000 per year. Almost 15% of all respondents earn \$300,000 a year, while 18% earn less than \$60,000 per year. Higher income levels of the respondents coincide with higher education levels. This household income levels far exceed mean income levels in Colorado and the United States (Ellingson, 2007)³⁶.

Almost all (98.8%) Routt County summer tourists reside in the United States, travelling from 44 of the 50 States. Nearly half of the respondents reside in Colorado while tourists from Texas and California each contribute about 7% of the summer tourist population. Of the respondents from Colorado, 55% reside in the Denver metropolitan area, approximately equivalent to the proportion of state population provided by Denver Metro (Ellingson, 2007)³⁷.

Summer Tourists' Travel Behavior and Expenditures

Typical trip features of summer visitors can further enhance our understanding of the Routt County tourism experience. Specifically, the survey provides information about the length of stay, participation in activities, and where and how money is spent. Here it is important to distinguish between total expenditures, used in travel cost analysis to estimate total value, and local expenditures, which are more important for economic development purposes.

A tourist spends an average of \$177 per day to vacation in Routt County, with approximately \$153 spent per day in Steamboat Springs' local economy. On average, a tourist will travel to Steamboat Springs for four days or an average of \$708 per Routt County vacation, with \$612 spent in Steamboat Springs' local economy. Tourists expenditures are broken down as follows: 46.6 % is spent on lodging, 35.0 % on food and drinks, 9.7 % on transportation and 8.7 % is spent on entertainment activities (Ellingson, 2007)³⁸.

Visitors to the Steamboat Springs area expect to take an average of 2.7 trips, staying an average of approximately eleven days per year in the area. Routt County tourists travel approximately 857 miles and about 6.5 hrs travel time one way on their most recent trip. Visitors stated they would travel up to 996 miles (one-way) to another resort area with scenery comparable to the existing ranch lands around Steamboat Springs. Some 90% of the respondents stated that their current trip to the Steamboat Springs area was the sole purpose of their travel (Ellingson, 2007)³⁹.

Survey respondents were asked to select from a list of primary activities he or she participated in during their most recent trip to the Steamboat Springs area (Table 1). Summer tourists reported hiking and walking most frequently. Approximately half of the respondents partake in shopping, sightseeing/photography or driving for pleasure. Between 20% and 40% of respondents state that wildlife viewing, fishing, bicycling or picnicking is among their primary activities. While only 9.8% of respondents stated that a ranch visit was a primary activity during their most recent trip to the Steamboat Springs area, 43.9% stated that they had visited a western ranch at some time. Fewer than 7% of respondents stated that there were other activities that they would have liked to enjoy in the Steamboat Springs area that were not available to them (Ellingson, 2007)⁴⁰.

Table 1: Top 10 Primary Activities Tourists Participated in During Their Most Recent Trip to Routt County in 2005

Primary Activities	Percentage (N =408)
Hike/ Walk	62.7%
Shop	49.3%
Sightsee/ Photography	46.6%
Drive for pleasure	41.4%
Wildlife Viewing	37.0%
Fish	29.7%
Bicycle/ Mt. Bike	25.0%
Picnic	24.3%
River Raft	17.4%
Attend a Rodeo	16.9%

Respondents were asked to estimate how much they expect to spend on their current trip and what proportion of their spending they expect will be spent within Routt County by specified expenditure categories (Table 2). From the 420 surveys, 179 respondents provided their expenditure information within each of the given expenditure categories. Expenditures were in the following categories, in descending order of average spending: lodging, food and drink, transportation, entertainment and other expenditures. On average, 83.3% of total trip expenditures are within Routt County. Transportation expenditures have the largest disparity between total and local trip expenditures since tourists either buy plane tickets or gasoline for their automobiles prior to arriving in the Steamboat Springs area (Ellingson, 2007)⁴¹.

Table 2: Routt County Tourists' Average Per Person Per Trip Day Expenditures

Expenditure Category	Total (N=179)	Local (N=179)
Transportation	\$36.66	\$18.74
Lodging	\$79.30	\$78.11
Food and Drink	\$29.38	\$27.00
Entertainment	\$12.64	\$11.93
Other	\$18.56	\$16.98
Total	\$176.78	\$152.76

Residents' Demographics

Residents of Routt County were asked similar socio-demographic questions as to the summer tourists to the region. The residents were not asked about travel behavior and expenditures but they were asked certain questions about their household such as the length of time residing and their home's distance from ranchlands. The residents' sample results are compared to the Census population results to establish the representativeness of the sample and the validity of extrapolating our results to the broader population. It is important to note that the Census data were gathered in 1999 for the 2000 Census, while the survey data were collected 5 years later in 2004, so any differences between the sample and the population can partially be contributed to the gap in time between the two data collections.

The 2000 US Census population for Routt County was 19,690 (US Census Bureau)⁴². With an annual population growth rate of 5.6% (1990-2000), the projected population in 2005 was 20,788. Of the returned household surveys, 52.5% were completed by a male, comparable to the US Census population estimate of 54.5% male (US Census Bureau)⁴³. The median age of the sample is 51 years while the median age in the population is 40 years old. Approximately 40% of the survey respondents have at least a four-year college degree (31.1% of the population over the age of 25) and 30.7% of the total sample (11.4% of the population over the age of 25) have earned a professional degree. The median household income was \$76,725 and \$60,528 for the sample and the population, respectively, in 2005 dollars. The average household size in Routt County, according to the survey results, is 2.6 people and 2.4 for the Census population estimate (Magnan, 2005)⁴⁴.

The residents of Routt County were asked to choose their employment status from the same categories as the tourist sample. Nearly 70% of Routt County residents are employed outside the home, while 10.5% work within their home. Only 1.4% of Routt County's residents are unemployed while 17.6% are retired (Magnan, 2005)⁴⁵, quite distinct from the visitor sample.

A further understanding of the residents' lifestyle may assist in understanding their values of ranchland open space. Almost all (90.4%) resident respondents own their homes and have lived in the area for an average of 19.3 years, potentially pointing to some skewness in the sample due to the quieter summer season or due using voter rolls, which might exclude the younger and more transient winter resident population, but probably more closely mimics the preferences of the population of likely voters. The average distance from the nearest ranchland open space is 1.89 miles. Families with agricultural backgrounds comprise nearly one third (30.6%) of the residents' living in Routt County (Magnan, 2005)⁴⁶.

Comparison of Values, Economic Impacts and Attitudes

Economic Values and Impacts to Routt County's Economy

What if valuable features of the Routt County tourism experience change? Will tourists stay more or less time, spend more or less money locally? Respondents were asked how their trip length and trip expenditures might change contingent on if existing ranch lands around Steamboat Springs had changed to urban uses. Table 3 illustrates the percentage of respondents who would change their expenditures and trip length due to a reduction of ranch open space in Routt County. The results show that approximately 50% of the respondents would reduce both their expenditures and number of days spent in the Steamboat Springs area while less than 1% of the respondents would increase expenditures and visitation if existing ranch lands were converted to urban uses. The average trip would be reduced by approximately 2.3 days and the average reduction in expenditures would be approximately \$100 per person per day (Ellingson, 2007)⁴⁷. On average, about \$230 per person per trip would not be spent in the Steamboat Springs area due to existing ranch lands converting to urban uses (Table 3).

Table 3: Tourists' Responses If Ranch Lands Around Steamboat Springs were Changed to Urban Uses (i.e. housing and other resort development)

Would this change your vacation experience in the Steamboat Springs area to be worth fewer (or more) dollars per day during the summer season?			Would this change cause you to visit the Steamboat Springs area fewer (or more) days during the summer season?		
	N	Percent		N	Percent
Fewer	192	54.7%	Fewer	177	50.6%
No Change	157	44.7%	No Change	172	49.1%
More	2	0.6%	More	1	0.3%
Total	351	100.0%	Total	350	100.0%
Per Person Per Day Values			Days Per Trip Values		
Mean Reduction			Mean Reduction		
\$99.05			2.3		

In order to extrapolate the per person per trip values to an annual impact value, the total number of summer tourists needs to be estimated. Based on Steamboat Springs Chamber of Commerce estimates, there are approximately 224,770 tourists who stay in hotels during a summer tourist season (Evans Hall, 2006)⁴⁸. To arrive at the number of tourists who camp, we divided the total visitor days at Routt County State Parks (535,968) by the average length of a trip derived from our sample and found that there are 134,242 total camp visitors to the Steamboat Lake and Stagecoach State Parks located within Routt County (Colorado State Parks, 2005)⁴⁹. The actual percentage of tourist versus resident campers at these state parks is unknown. For simplicity, it is assumed that half of the visitors were Routt County residents, so 67,121 of the total camp visitors are considered non-resident tourists to Routt County to obtain a mean estimate of total impacts to the region. Therefore, approximately 291,891 tourists visit Routt County during the summer months (Ellingson, 2007)⁵⁰.

The 54.7% of survey respondents who stated they would reduce their trip expenditures to Steamboat if existing ranch lands were converted to urban uses, therefore, represents 159,664 tourists per year. We multiply the mean value of reduction in spending (\$227.82) by the total number of tourists changing their trip behavior to estimate the average loss of summer tourist revenue (Kiker and Hodges, 2002)⁵¹. The estimated loss of summer tourist revenue if Routt County ranchlands were developed is \$36,373,940 per year. Since approximately 92.7% of tourists' expenditures are spent locally, about \$36 million in direct annual tourist revenue would be lost from Routt County's economy (Ellingson, 2007)⁵².

Magnan *et al.* (2005)⁵³ found a positive response (93.7 % stated "yes") to preserving ranchland open space in the study of the value of ranchlands to residents. Respondents were asked their willingness to pay to protect local ranch open space through the county government. Magnan *et al.* (2005)⁵⁴ found that residents would be willing to pay an average of \$220 per year to protect the existing ranchland in Routt County. The aggregate benefit of ranch open space conservation can be calculated by multiplying the number of households affected by the mean household willingness to pay (Magnan *et al.*, 2005⁵⁵; Willis and Garrod, 1993⁵⁶). The number of households in Routt County in 2004 was 9,890 which results in a total annual benefit of \$2,175,800, or nearly three times the 2005 Routt County program budget of \$748,000 (Magnan *et al.*, 2005)⁵⁷. Residents' benefit of ranchland open space is approximately 6 % of the summer tourists' benefit considering the number of residents relative to visitors.

The nonconsumptive use value of rangeland open space in Routt County to summer tourists and residents is \$38.5 million per year. Some, 94.4 % of the total nonconsumptive use value can be translated as the tourists' consumer surplus while the remaining 5.6 % is residents' consumer surplus. This represents a relatively large opportunity for the local people to capture some of the value they are creating for visitors. Such redistributive opportunities are potentially realized through a variety of public policy alternatives. It is important to note that this research surveyed actual tourists to the area and therefore may not fully capture the other type of tourists who value urban uses more than ranch open space. Therefore, a conversion of ranch open space to urban uses would not be a zero sum loss since there is opportunity for possible gains from new development.

Attitudes Towards Routt County's Natural and Man-Made Assets

Understanding the motivations for visiting and living in Routt County can shed some light on these responses to potential land use change. Respondents were asked to rate how natural and man-made assets contributed to their enjoyment of the Steamboat Springs area. The rating was based on a nine point Likert scale where nine represented the asset strongly contributed and one represented the feature strongly detracted from enjoyment (resident survey only) or visiting (tourist survey only) the Steamboat Springs area (Table 4). Each of the features listed in the table were the general headings for the more specific assets described in the survey. Each general asset had between five and twelve specific assets listed within the category which the respondent also rated using the Likert scale.

Table 4: Tourists' and Residents' Attitudes towards Routt County's Natural and Man-Made Assets (Mean Values, 9-1 scale where 9 is very important, 5 is neutral and 1 is very unimportant/irrelevant)

Natural and Man-Made Assets	Tourist	Resident
Natural Environment	8.00	8.50
Ranch Open Space	7.00	7.70
Western Historical Preservation	7.00	6.90
Recreation Amenities	7.00	6.40
Community Services	6.00	6.60
Urban Development	6.00	5.60

The natural environment is rated as the asset that most strongly adds to both the tourists' and residents' experience in the Steamboat Springs area. Ranch open space is more highly rated by residents than by tourists; however, both feel that it adds significantly to their experience. Tourists value the local recreation amenities more than the residents, while the residents value the community services more than the tourists. Logically, summer tourists are mainly attracted to Steamboat Springs for its recreational opportunities and they do not utilize the local community services as much as residents do. Lastly, both tourists and residents indicate that local urban development is a relatively minor attractive feature of the Steamboat Springs area (Ellingson, 2007⁵⁸; Magnan, 2005⁵⁹).

Conclusion

There is a value of agricultural landscapes to tourists and local residents that is currently not captured in the marketplace. The landowners are providing a portion of this landscape but

not receiving the 'uncaptured' value, known as the consumer's surplus. It is easy to see the market value of converting landscapes and less easy to see the nonconsumptive use value of not converting them. Redistributive policies have the potential to help to provide incentives to landowners to act on behalf of these other stakeholders by lowering the opportunity cost of open lands stewardship.

Routt County is a unique community and tourist destination located in northwestern Colorado that still holds the long tradition of the 'Old West.' Currently, there are 55,000 acres of agricultural land held under conservation easements through the voluntary purchase of development rights program paid for by local residents. There are nearly 300,000 tourists who visit the area during the summer months and approximately 10,000 households within Routt County. Their combined nonconsumptive use value of ranchland open space in the area of \$38.5 million per year, with 94.4% of the total value translated as the tourists' consumer surplus and the remaining 5.6% is residents' consumer surplus. This represents an opportunity for the local community to capture some of the value they are creating and such redistributive opportunities are potentially realized through different policy scenarios.

The maintenance of valuable rural landscapes attributes in a fast growing, increasingly wealthy, and highly naturally endowed community is a costly endeavor. Depending on the choice of policy tool, the costs and benefits can accrue to the general resident population, to particular subgroups of the resident population (e.g. landowners, particular service users) and/or to visitors. These costs and benefits may enter into the formal economy or may remain as uncaptured economic value or consumer's surplus.

Since the tourists have a greater consumer surplus than residents towards the conservation of ranch open space, it would seem logical to place more of a tax burden on the former rather than the latter. Potential policy options to achieve this goal would be an increase in the lodging tax, gasoline tax or an airport tax. Increasing the sales tax might be an appropriate policy alternative to explore if the policy goal were to capture the consumer surplus from all stakeholders (residents and tourists). However, if this were the case, it would be important to evaluate the distributional implications of the sales tax so as to not put undue burden on any subgroup relative to their aggregate consumer surplus. Further research on evolving payment mechanisms for ecosystem services could better inform sound policy decisions for compensating the stewards of valuable services through a PDR or other such program and for capturing valuable economic opportunity in Routt County, Colorado and other similar communities.

End Notes: Ellingson, Lindsey J. and Andrew F. Seidl, "Tourists' and Residents' Values for Maintaining Working Landscapes of the 'Old West'." [Online Journal of Rural Research & Policy](#) (2009.1).

1. Loomis, John B. and Richard G. Walsh. 1997. *Recreation Economic Decisions: Comparing Benefits and Costs*, 2nd ed. State College, PA: Venture Publishing, Inc. [\[back\]](#)
2. McGranahan, David A. and Patrick Sullivan. February 2005. "Farm Programs, Natural Amenities, and Rural Development." *Amber Waves*, Economic Research Services, USDA: 29-35. [\[back\]](#)
3. Whitener, Leslie A. and David A. McGranahan. February 2003. "Rural America: Opportunities and Challenges." *Amber Waves*, Economic Research Services, USDA: 15-21. [\[back\]](#)
4. McGranahan, David A. September 1999. "Natural Amenities Drive Rural Population Change." AER No. 781. Food and Rural Economics Division, Economic Research Service, USDA. 24pgs. [\[back\]](#)
5. Beale, Calvin L. and Kenneth M. Johnson. 1998. "The Identification of Recreational Counties in Nonmetropolitan Areas of the USA." *Population Research and Policy Review*, 17: 37-53. [\[back\]](#)
6. Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
7. Rosenberger, Randall and Richard Walsh. 1997. "Nonmarket Value of Western Valley Ranchland Using Contingent Valuation." *Journal of Agricultural and Resource Economics*, 22 (2): 296-309. [\[back\]](#)
8. Orens, Adam, Andrew Seidl, and Stephan Weiler. 2006. "Winter Tourism and Land Development in Gunnison County, Colorado." In Thomas Clark, Alison Gill and Rudi Hartmann (Eds.), *Mountain Resort Planning and Development in an Era of Globalization* (pp. 91-107). Cognizant Communications Corporation. [\[back\]](#)
9. Orens, Adam and Andrew Seidl. 2008. "Working Lands and Winter Tourists in the Rocky Mountain West: A Contingent Behavior, Revealed Preference and Input-Output Analysis." *Tourism Economics*. Forthcoming. [\[back\]](#)
10. Magnan, Nicholas and Andrew Seidl. June 2004. "Community Economic Considerations of Tourism Development." Department of Agricultural and Resource Economics, Cooperative Extension, Colorado State University. June 2004-EDR-04-06. 28 pgs. [\[back\]](#)
11. Magnan, Nicholas, Andrew Seidl, C.J. Mucklow, and Deborah Alpe. October 2005. "The Societal Value of Ranchlands to Routt County Residents, 1995-2005." Department of Agricultural and Resource Economics, Cooperative Extension, Colorado State University. October 2005-EDR 05-01. 13 pgs. [\[back\]](#)
12. Rosenberger, Randall and John B. Loomis. 2001. "Benefit Transfer of Outdoor Recreation Use Values: A Technical Document Supporting the Forest Service Strategic Plan" (2000 Revision), *General Technical Report RMRS-GTR-72*. Fort Collins, CO: USDA Forest Service, Rocky Mountain Research Station. [\[back\]](#)
13. Turner, Monica G., Eugene P. Odum, Robert Costanza and Thomas M. Springer. 1988. "Market and Nonmarket Values of the Georgia Landscape." *Environmental Management*, 12(2): 209-217. [\[back\]](#)
14. McCool, Stephen F. and Michael E. Patterson. 2000. "Trends in Recreation, Tourism and Protected Area Planning." In William C. Gartner and David W. Lime (Eds.), *Trends in Outdoor Recreation, Leisure and Tourism* (pp. 111-119). New York: CABI Publishing. [\[back\]](#)

15. Green, Gary Paul. 2001. "Amenities and Community Economic Development: Strategies for Sustainability." *The Journal of Regional Analysis and Policy*, 31(2): 61-75. [\[back\]](#)
16. Bergstrom, John C., B. L. Dillman and John R. Stoll. July 1985. "Public Environmental Amenity Benefits of Private Land: The Case of Prime Agricultural Land." *Southern Journal of Agricultural Economics*, 17(1): 139-149. [\[back\]](#)
17. Nelson, Peter B. 1999. "Quality of Life, Nontraditional Income and Economic Growth: New Development Opportunities for the Rural West." *Rural Development Perspectives*, 14(2): 32-37. [\[back\]](#)
18. Beale, Calvin L. and Kenneth M. Johnson. 1998. "The Identification of Recreational Counties in Nonmetropolitan Areas of the USA." *Population Research and Policy Review*, 17: 37-53. [\[back\]](#)
19. Green, Gary Paul. 2001. "Amenities and Community Economic Development: Strategies for Sustainability." *The Journal of Regional Analysis and Policy*, 31(2): 61-75. [\[back\]](#)
20. Marcouiller, David W. and Greg Clendenning. 2005. "The Supply of Natural Amenities: Moving from Empirical Anecdotes to a Theoretical Basis." In Gary Paul Green, Steven C. Deller and David W. Marcouiller (Eds.), *Amenities and Rural Development: Theory, Methods and Public Policy* (pp. 6-32). Northampton, MA: Edward Elgar Publishing, Inc. [\[back\]](#)
21. Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
22. Magnan, Nicholas. Fall 2005. "The Economic Value of Ranch Open Space to Residents: A Contingent Valuation Study of Changes Over the Past Decade." Master's Thesis, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 112 pgs. [\[back\]](#)
23. McGranahan, David A. September 1999. "Natural Amenities Drive Rural Population Change." AER No. 781. Food and Rural Economics Division, Economic Research Service, USDA. 24pgs. [\[back\]](#)
24. McGranahan, David A. and Patrick Sullivan. February 2005. "Farm Programs, Natural Amenities, and Rural Development." *Amber Waves*, Economic Research Services, USDA: 29-35. [\[back\]](#)
25. Whitener, Leslie A. and David A. McGranahan. February 2003. "Rural America: Opportunities and Challenges." *Amber Waves*, Economic Research Services, USDA: 15-21. [\[back\]](#)
26. Nelson, Peter B. 1999. "Quality of Life, Nontraditional Income and Economic Growth: New Development Opportunities for the Rural West." *Rural Development Perspectives*, 14(2): 32-37. [\[back\]](#)
27. Magnan, Nicholas, Andrew Seidl, C.J. Mucklow, and Deborah Alpe. October 2005. "The Societal Value of Ranchlands to Routt County Residents, 1995-2005." Department of Agricultural and Resource Economics, Cooperative Extension, Colorado State University. October 2005-EDR 05-01. 13 pgs. [\[back\]](#)
28. Magnan, Nicholas, Andrew Seidl, C.J. Mucklow, and Deborah Alpe. October 2005. "The Societal Value of Ranchlands to Routt County Residents, 1995-2005." Department of Agricultural and Resource Economics, Cooperative Extension, Colorado State University. October 2005-EDR 05-01. 13 pgs. [\[back\]](#)
29. Greenwood, Daphne and Tom Brown. undated. *An Overview of Colorado's State and Local Tax Structures*, Center for Colorado Policy Studies. Accessed at <http://web.uccs.edu/ccps/pdf/Tax%20Overview%20Article.PDF>. Accessed November 2003. [\[back\]](#)

- [30.](#) Magnan, Nicholas and Andrew Seidl. June 2004. "Community Economic Considerations of Tourism Development." Department of Agricultural and Resource Economics, Cooperative Extension, Colorado State University. June 2004-EDR-04-06. 28 pgs. [\[back\]](#)
- [31.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [32.](#) Magnan, Nicholas. Fall 2005. "The Economic Value of Ranch Open Space to Residents: A Contingent Valuation Study of Changes Over the Past Decade." Master's Thesis, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 112 pgs. [\[back\]](#)
- [33.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [34.](#) Magnan, Nicholas. Fall 2005. "The Economic Value of Ranch Open Space to Residents: A Contingent Valuation Study of Changes Over the Past Decade." Master's Thesis, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 112 pgs. [\[back\]](#)
- [35.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [36.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [37.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [38.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [39.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [40.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [41.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [42.](#) U.S. Census Bureau. Accessed at: <http://quickfacts.census.gov/qfd/states/08/08107.html>. Accessed January 2005. [\[back\]](#)

- [43.](#) U.S. Census Bureau. Accessed at: <http://quickfacts.census.gov/qfd/states/08/08107.html>. Accessed January 2005. [[back](#)]
- [44.](#) Magnan, Nicholas. Fall 2005. "The Economic Value of Ranch Open Space to Residents: A Contingent Valuation Study of Changes Over the Past Decade." Master's Thesis, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 112 pgs. [[back](#)]
- [45.](#) Magnan, Nicholas. Fall 2005. "The Economic Value of Ranch Open Space to Residents: A Contingent Valuation Study of Changes Over the Past Decade." Master's Thesis, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 112 pgs. [[back](#)]
- [46.](#) Magnan, Nicholas. Fall 2005. "The Economic Value of Ranch Open Space to Residents: A Contingent Valuation Study of Changes Over the Past Decade." Master's Thesis, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 112 pgs. [[back](#)]
- [47.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [[back](#)]
- [48.](#) Evans Hall, Sandy. Steamboat Springs Chamber of Commerce. Conversation on May 22, 2006. [[back](#)]
- [49.](#) Colorado State Parks. 2005. *Steamboat Lake State Park FY04-05 Park Facts*. Accessed at http://www.parks.state.co.us/home/publications/Fact_Sheets/0405_Fact_Sheet/Steamboat_06.pdf. Accessed on May 22, 2006. [[back](#)]
- Colorado State Parks. 2005. *Stagecoach State Park FY04-05 Park Facts*. Accessed at http://www.parks.state.co.us/home/publications/Fact_Sheets/0405_Fact_Sheet/Stagecoach_06.pdf. Accessed on May 22, 2006. [[back](#)]
- [50.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [[back](#)]
- [51.](#) Kiker, Clyde and Alan W. Hodges. December 2002. "Economic Benefits of Natural Land Conservation: Case Study of Northeast Florida." Final Report Submitted to Defenders of Wildlife in Fulfillment of Sponsored Project Agreement. 70pgs. [[back](#)]
- [52.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [[back](#)]
- [53.](#) Magnan, Nicholas, Andrew Seidl, C.J. Mucklow, and Deborah Alpe. October 2005. "The Societal Value of Ranchlands to Routt County Residents, 1995-2005." Department of Agricultural and Resource Economics, Cooperative Extension, Colorado State University. October 2005-EDR 05-01. 13 pgs. [[back](#)]
- [54.](#) Magnan, Nicholas, Andrew Seidl, C.J. Mucklow, and Deborah Alpe. October 2005. "The Societal Value of Ranchlands to Routt County Residents, 1995-2005." Department of Agricultural and Resource Economics, Cooperative Extension, Colorado State University. October 2005-EDR 05-01. 13 pgs. [[back](#)]
- [55.](#) Magnan, Nicholas, Andrew Seidl, C.J. Mucklow, and Deborah Alpe. October 2005. "The Societal Value of Ranchlands to Routt County Residents, 1995-2005." Department of Agricultural and Resource Economics, Cooperative Extension, Colorado State University. October 2005-EDR 05-01. 13 pgs. [[back](#)]

- [56.](#) Willis, Ken G. and Guy D. Garrod. 1993. "Valuing Landscape: A Contingent Valuation Approach." *Journal of Environmental Management*, 37: 1-22. [\[back\]](#)
- [57.](#) Magnan, Nicholas, Andrew Seidl, C.J. Mucklow, and Deborah Alpe. October 2005. "The Societal Value of Ranchlands to Routt County Residents, 1995-2005." Department of Agricultural and Resource Economics, Cooperative Extension, Colorado State University. October 2005-EDR 05-01. 13 pgs. [\[back\]](#)
- [58.](#) Ellingson, Lindsey J. 2007. "Comparing Methodologies to Estimate Tourists' Nonconsumptive Use Values of Recreation, Roadways and Ranches: International and Domestic Applications." PhD Dissertation, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 201 pgs. [\[back\]](#)
- [59.](#) Magnan, Nicholas. Fall 2005. "The Economic Value of Ranch Open Space to Residents: A Contingent Valuation Study of Changes Over the Past Decade." Master's Thesis, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO: 112 pgs. [\[back\]](#)

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