



Economic Development Report

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THE VALUE OF RANGLAND TO ROUNT COUNTY RESIDENTS, 1995-2005¹ Nicholas Magnan,² Andrew Seidl,³ C.J. Mucklow,⁴ and Deborah Alpe^{5 6}

- *More than 90% of resident survey respondents would vote to protect Routt county ranchlands.*
- *Routt residents are willing-to-pay \$220 per year to preserve ranchlands in the county.*
- *The estimated value of ranchlands to current Routt residents is likely to be about \$20-30 million.*
- *The natural environment, ranchlands, and western historical preservation are the three most important contributors to local quality of life in Routt County.*

Contribution of ranchland to society

Among the principal growth related concerns of Routt county residents is the conversion of privately held

farms and ranches on large tracts of land into rural residential properties. Only the productive value of ranchland is fully captured in its market price. Other valuable features of ranchland are reflected indirectly in the market (e.g., viewscape, recreation). And for some very real and important values of ranchland (e.g., culture, environmental quality), market signals scarcely exist at all. Consequently, the market will undervalue the contribution of ranchland to society and market transactions will result in less ranchland than would be socially desirable.

Here, we hope to estimate the non-productive benefits of Routt County ranchland that accrue to Routt County residents. We will use an economic valuation method called contingent valuation to replicate a study done in Routt County a decade ago. This estimate will contribute to our understanding of the implications of local

¹ For somewhat more detail, please see "The societal value of ranchlands to Routt County residents, 1995-2005." EDR 05-01, <http://dare.agsci.colostate.edu/csuaecon/extension/pubstools.htm>. For the complete study, please see the masters thesis entitled, "How Routt County Residents Value Ranch Open Space, 1995-2005," by N. Magnan, 2005, Department of Agricultural and Resource Economics, Colorado State University.

² Graduate Research Assistant, Colorado State University.

³ Associate Professor and Extension Specialist—Public Policy, Colorado State University.

⁴ Director, Routt County Cooperative Extension, Steamboat Springs, Colorado.

⁵ Director, Jackson County Cooperative Extension, Walden, Colorado.

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land use change and policies on local residents. In August of 2004, surveys were sent to 1,074 registered voters and a return rate of 44% was obtained from the sample.

Survey approach

The survey used in this study is nearly identical to that used by Rosenberger (1996) and Rosenberger and Walsh (1997) in order to obtain time series data that allow for intertemporal comparisons for the value of ranch open space in Routt County. These studies confronted residents with a hypothetical referendum regarding ranch open space conservation. Residents were asked what the ideal amount of rangeland to conserve would be and if they would vote “yes” on a referendum to conserve that amount of rangeland. These questions were asked in that order to set up the CVM question that asked what dollar amount would be the highest they would have to pay and still vote “yes” on the referendum.

Summary of results

- ◆ Practically no change from 1994 to 2004 was observed concerning a referendum to protect ranch open space. In 1994, 96.5% of respondents said they would have voted “yes” on such a referendum at no cost to them. In 2004, 93.7% said they would. When the referendum would cost respondents at least \$1.00, 91.1% said they would have voted “yes” in 1994. In 2004, 91.3% of respondents said they would vote “yes” on the referendum at a cost of at least \$1.00.
- ◆ Respondents in 1994 would be willing to pay a maximum of \$182.02 on average to protect local ranch open space through the county government. In 2004 the average WTP reported rose to \$220.38. The mean WTP for rangeland in and around Steamboat Springs rose from \$90.09 in 1994 to \$119.41 in 2004. The mean WTP for rangeland elsewhere in Routt County increased from \$94.68 in 1994 to \$105.58 in 2004. Residents were WTP more for conservation in and around Steamboat Springs in 2004 than they were in 1994, and at least as much in areas elsewhere in the county.
- ◆ The number of households in Routt County in 2004 was about 9,890. Using mean WTP values, the total annual benefit of ranch open space conservation to Routt residents was \$2,175,800 in 2004 or nearly three times the 2005 county program budget of \$748,000. Using the median values

the total annual benefit of ranch open space conservation was \$989,000 in 2004. Over a 30 yr time horizon, the total value of rangelands accruing to current Routt residents is approximately \$20-30 million.

- ◆ The 1994 and 2004 surveys both asked respondents to rate a series of natural and man made features of Routt County regarding their contribution to their well being: recreation amenities (trails, golf courses etc.), western historical preservation (working ranches, western art etc.), urban development (condos, restaurants etc.), community services (medical, religious, etc.), natural environment (mountains, rivers etc.) and ranch open space (meadows, hay lands etc.). The rank order of characteristic categories changed slightly from 1994 to 2004. In 1994 the highest rated characteristic categories were natural environment, ranch open space and recreation investments, followed by western ranch culture, community services and urban development. In 2004 the highest rated characteristics were natural environment, ranch open space and western heritage, followed by community services, recreation attributes and urban characteristics.
- ◆ The factors that increase residents’ likelihood of voting “yes” on a referendum to protect ranch open space at no cost were how important they felt the issue was (positively), the distance they live from rangeland (positively), their age (negatively until middle age, then positively), the number of years they have lived in the county (negatively), and if they come from an agricultural background (positively). The factors that influenced residents’ likelihood to vote “yes” on a referendum to protect ranch open space at a cost of at least \$1.00 are the how important they felt the issue was (positively), their income (positively), their age (negatively until middle age then positively) and the number of years they have lived in the county (negatively).
- ◆ Residents’ WTP to protect ranch open space were influenced by how important they felt the issue was (positively), the amount they wished to protect (positively), their incomes (positively), and whether they come from an agricultural background (positively). Ranch open space in and around Steamboat Springs was treated separately from ranch open space elsewhere in the county and residents were sensitive to these differences.

- ◆ From the comparative statistics and economic models it appears that income is the primary determinant of WTP. Of all the demographic changes occurring in Routt County, only income showed to influence WTP to protect ranch open space.

Increasing income could mean more funds available to support conservation initiatives, but it is likely that land values will increase as well, causing additional pressure to develop.