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William D. Ruckelshaus
Institute of Environment
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The Cost of Community Services for Rural Residential Development in Wyoming

By Roger Coupal, David T. Taylor, and Don McLeod, Department of Agricultural and Applied Economics

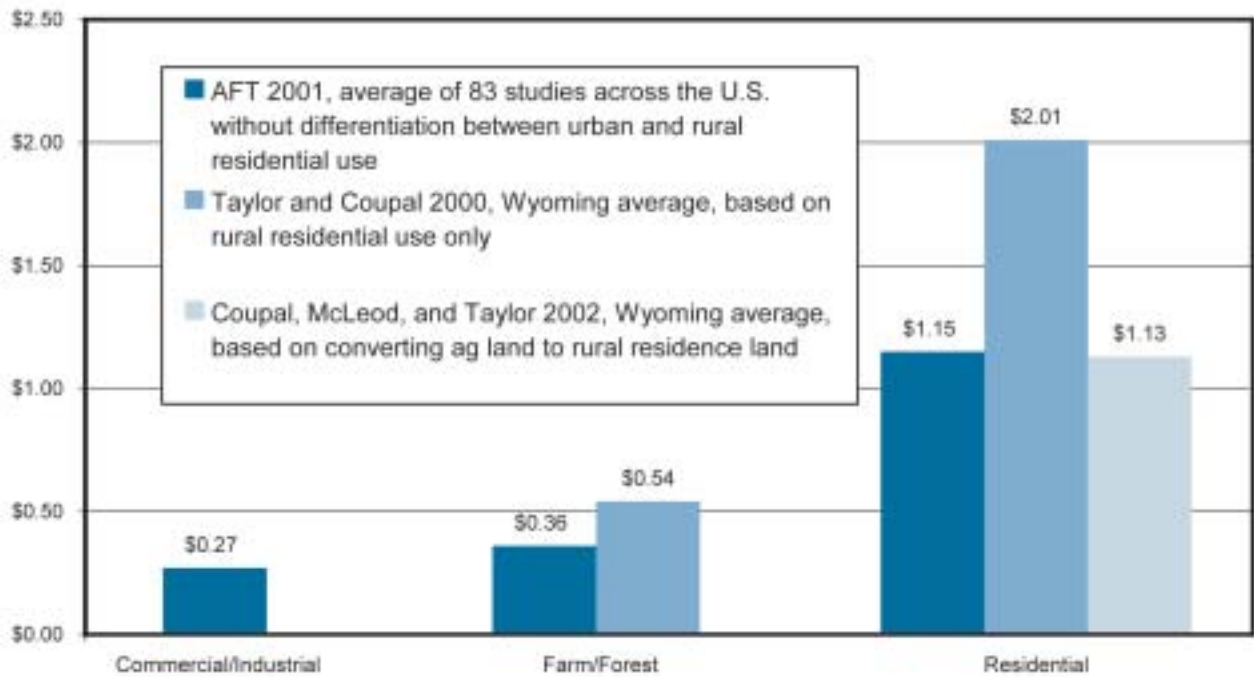
The changes that occur when rural agricultural lands are converted to residential use have become an increasingly important issue in many counties throughout the United States. Counties located in isolated areas with desirable qualities, such as mountains and beautiful views, are confronted with the same issues as counties next to growing urban areas. Farm and ranch land is sold and developed for people seeking a “rural lifestyle” or looking for vacation homes. As the population of rural landscapes grows, residents are confronted with the possible loss of many of the environmental and social qualities they value. They also face increased costs associated with this type of development, including higher local taxes. While residential development does increase the tax base, this increase is offset by the increased costs of providing community services such as fire and police protection, roads, and busing to area schools.

When agricultural land is converted to other uses, the financial impacts to county governments and public schools can be evaluated by studying the cost of community services. The American Farmland Trust (AFT) developed a simple method for comparing county expenses to revenues for three general types of land use: agricultural, commercial/industrial, and residential. In 2001, AFT summarized 83 studies of the cost of community services and found that residential use cost the counties an average of \$1.15 in community services for every \$1.00 in revenue created by that use (Figure 1). Farm and forest uses, on the other hand, cost only \$0.36 for every \$1.00 in revenue, similar to the cost of commercial use of the land (\$0.27).

A study conducted in Wyoming found similar results with a statewide average of \$0.54 in cost per dollar of revenue for lands under agricultural production, compared to \$2.01 in cost per dollar of revenue for rural residential lands (Taylor and Coupal 2000) (Figure 1). The higher residential cost amount (\$2.01) compared to the AFT figure (\$1.15) can be explained in part by the fact that the AFT studies did not differentiate between urban and rural residential land use, a significant differentiation because rural residences tend to represent higher costs to county governments and school districts than urban residences.

The 1997 Census of Agriculture indicated that the average size of an agricultural operation in Wyoming was 3,781 acres. If this “average” ranch operation were

Figure 1. Cost of community services (represented as cost of services per dollar of revenue) for different land-use categories as determined by three different studies.



subdivided into 35-acre lots, it would result in 108 new residential lots. Assuming an average household size of 2.59 people, these lots would house 280 new rural residents when developed. To estimate the impacts this could have on county governments, a study was conducted using a statistical model to evaluate changes that would occur if 35 acres of private range land in Wyoming were converted to a home for one average-size family with an average county income (Coupal et al. 2002). The model predicts total revenues and expenditures for county governments and school districts. Results show that replacing 35 acres of agricultural land with one family residence results in an average net loss to counties throughout the state (Table 1). County expenses for every \$1.00 in revenue

ranged from a low of \$1.03 in Weston County to a high of \$1.45 in Hot Springs County (Teton County could not be estimated because the high wealth and income in the county would skew the model results). On the average across Wyoming, converting 35 acres of agricultural land to a residence creates \$1.13 in county government and school expenses for every dollar in revenue (Figure 1).

These results confirm the general conclusions of the AFT study from other states nationwide that conversion of open space to residential use is a net loss to county taxpayers. This does not include the value of wildlife habitat, water quality protection, maintenance of view sheds, and other benefits related to open space that could be added to these figures.

Table 1. Costs of community services for fire, police, schools, and other services if 35 acres of private Wyoming range land were converted to rural residential use for one family (based on statistical model calculations).

County	\$ Cost to County Government for Every \$1.00 of Revenue
Albany	1.21
Big Horn	1.13
Campbell	1.17
Carbon	1.04
Converse	1.12
Crook	1.08
Fremont	1.11
Goshen	1.12
Hot Springs	1.45
Johnson	1.11
Laramie	1.12
Lincoln	1.15
Natrona	1.13
Niobrara	1.09
Park	1.13
Platte	1.12
Sheridan	1.11
Sublette	1.06
Sweetwater	1.20
Uinta	1.11
Washakie	1.10
Weston	1.03
State Average	1.13

References:

American Farmland Trust. 2001. "Cost of Community Service Studies." *AFT Farmland Information Center Fact Sheet*. Washington, D.C.: American Farmland Trust.

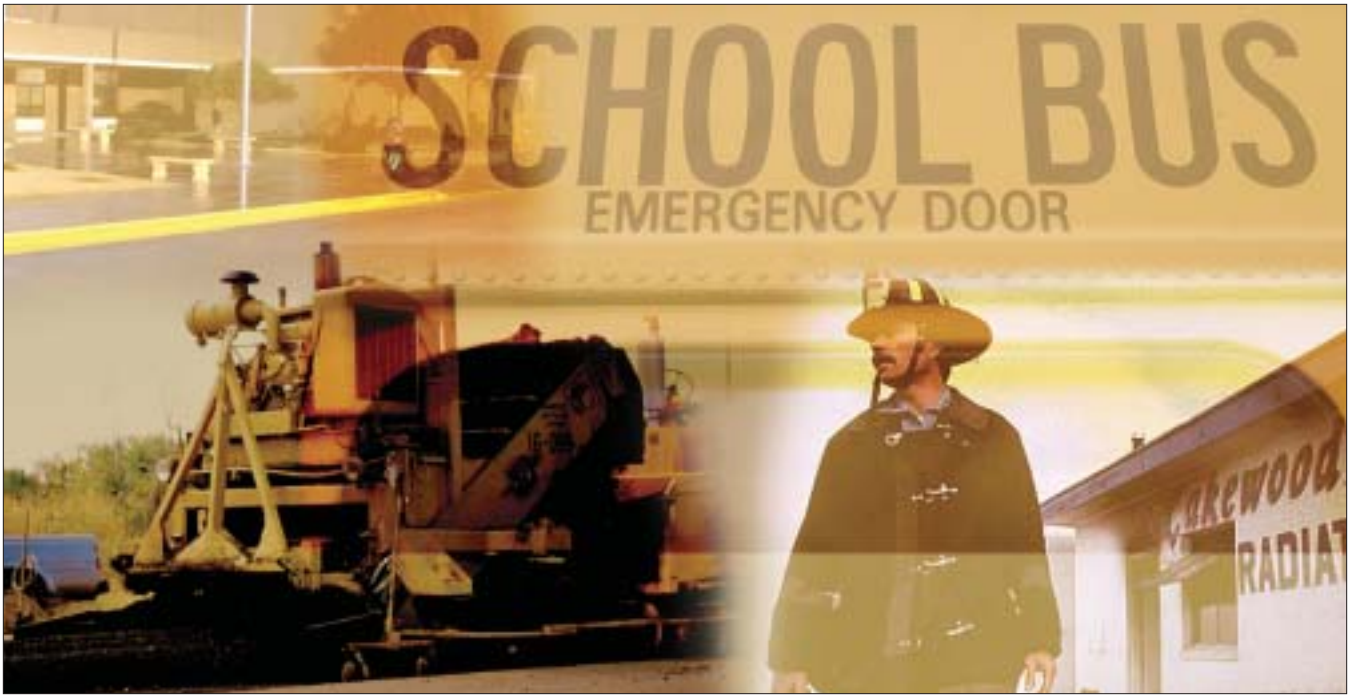
Coupal, Roger, Don McLeod, and David T. Taylor. 2002. "The Fiscal Impacts of Rural Residential Development: An Econometric Analysis of the Cost of Community Services." *Planning & Markets* <<http://www-pam.usc.edu/>>, 5(1):24-31.

Taylor, David T. and Roger H. Coupal. 2000. *The Cost of Rural Community Services in Wyoming*. Laramie, Wyoming: University of Wyoming. Department of Agricultural and Applied Economics.

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Wyoming Open Spaces Initiative
P.O. Box 3971
Laramie, WY 82071-3971