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# Natural Amenities and Rural County Migration<sup>1</sup>

A Research Brief in the IRIS Series<sup>2</sup>

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<sup>2</sup> The Internet Research Information Series (IRIS) is an internet accessible science report series covering outdoor recreation statistics, the National Kids Survey, natural lands research, and other human-dimension and demographics research related to natural resources. This research is a collaborative effort between the USDA Forest Service's Southern Research Station and its Forestry Sciences Laboratory in Athens, Georgia; the University of Georgia in Athens; and the University of Tennessee in Knoxville, Tennessee. <http://warnell.forestry.uga.edu/nrrt/nsre/IrisReports.html>

# Natural Amenities and Rural County Migration

## Introduction

Where people choose to reside in the U.S. is partly a function of where the most attractive landscapes and natural amenities are (weather, mountains, lakes, rivers, forests, open space, etc.). Understanding the relationship between location of residence and location of natural lands and associated amenities is important for effective regional policies, strategies and planning.



**An example of a natural amenity, a snow covered mountain adjacent to the Rugged Wilderness in Colorado, Photo by Ken Cordell**

One of the more important natural features usually considered by people when deciding where to live is climate. It is important that rural county authorities understand how climate change, as it redistributes weather patterns across different parts of the country, might affect future weather patterns and thus people's decisions of where to live. In the study highlighted here, an econometric model was estimated to help see the effects of type and location of natural features, such as landscape and weather, on rural population migration patterns between 1990 and 2007. The model was estimated for the 2,014 rural counties in the continental United States using various national natural resource, census and other data sources. The estimated model was then

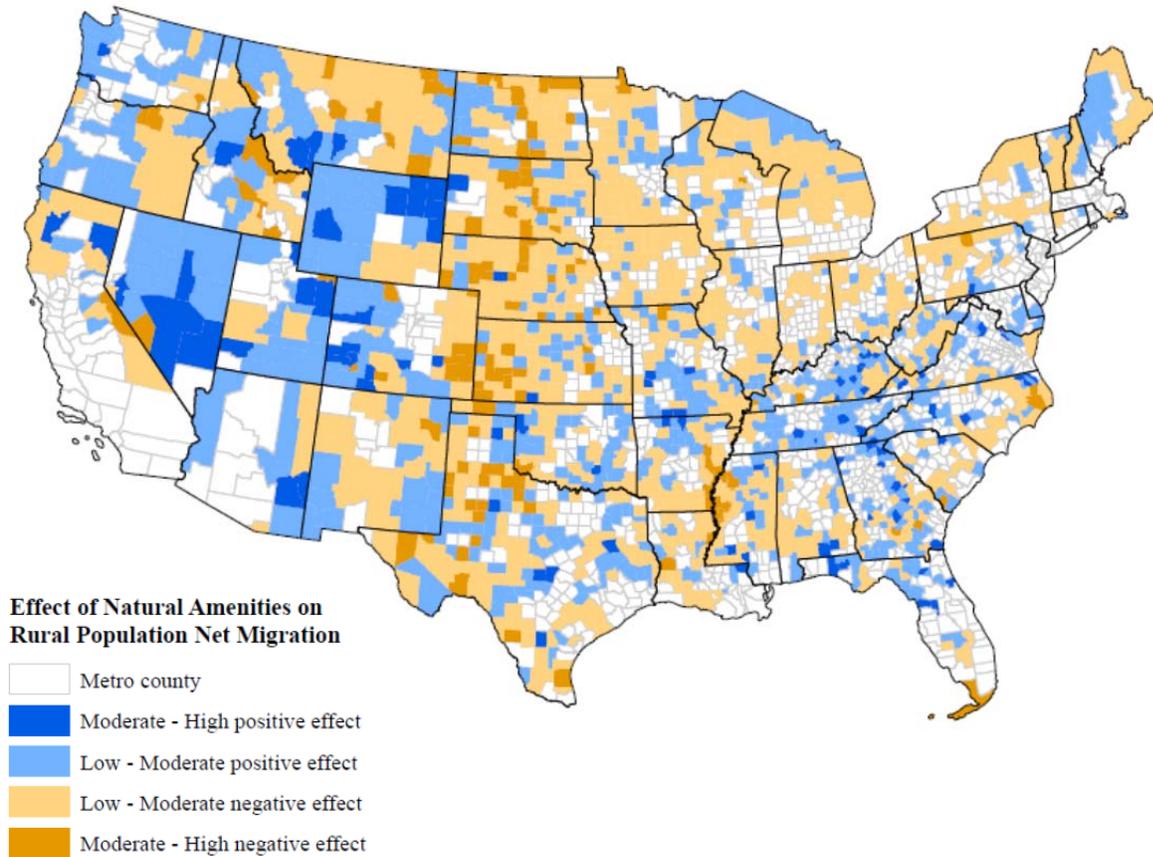
used to project the effects of predicted changes in natural amenity, climate and other model variables on rural county net migration and population growth to 2060.

**(To obtain a copy of the original research publication, see the internet access information at the end of this report. Full sets of tables, maps, graphs and modeling descriptions are shown in that publication.)**

## **Results**

Our research results indicate that people prefer rural areas with mild winters and cooler summers. But, given the pervasive predictions of future climate change across the country, there are likely to be shifts in patterns of future population migration as weather patterns change. For example, we may observe shifts in population migration patterns where movement is away from hot and humid areas in the Southern U.S. to traditionally colder northern areas as temperatures in these regions become warmer (especially in the winter months). While changes in migration patterns attributed to climate change are beyond the control of local policymakers, regions that are most likely to see climate-change induced population loss should be prepared with appropriate mitigating policies. Our results also suggest preference for varied landscapes that feature a mix of forest land and open space (such as pasture and range land). Local policymakers in areas endowed with these desirably varied landscapes should keep this in mind when formulating zoning laws and rural development plans.

During the projection period for this study, 2010 to 2060, predicted changes in natural amenities across rural counties of the U. S. were projected to have *positive* effects on rural population migration trends in most parts of the Inter-mountain and Pacific Northwest regions, and in some parts of the Southeastern, South Central, and Northeastern U S (e g , Southern Appalachian Mountains, Ozark Mountains, and northern New England) (see Map Figure below).



Effect of changes in natural amenities on rural population net migration, 2007-2020, 2010 RPA Climate Scenario A1B, Projection CGCM 3.1.

Changes in natural amenities were predicted to have *negative* effects on rural population migration trends during the 50- year projection period in many areas of the Midwest (e g , Great Plains and North Central regions).

**Observations**

Findings from this study have important public policy and private investment implications for both rural and urban areas. In rural areas, increases in migration are often seen as keys to ensuring sustained economic growth. While economic factors in rural counties are known to be strong drivers of population movement into those counties, equally strong is the existence of natural amenities. This certainly suggests a need to simultaneously formulate strategies for economic development and for natural resource conservation.

Given this importance of landscape in rural migration patterns, it seems critical to do what is necessary for preserving and enhancing scenic qualities of landscapes. The results of this research suggest there is a preference for varied landscapes that feature a mix of forest land and open space (e.g. pasture and range land). Local policy-makers and land use authorities in rural areas endowed of such landscapes should keep this preferred landscape mix in mind when formulating zoning laws, deciding on significant land development proposals, and conducting comprehensive land use plans. Without recognizing the important role that landscapes play in attracting new residents, and in retaining existing residents, some types of land development could threaten a significant component of an area's attractiveness. Often higher-income individuals are willing to pay higher prices for proximity to attractive landscapes. Thus, carefully managing land use offers an opportunity for attracting higher-income migrants who would likely bring more money into the local economy.

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