

# **Making a Case for Wilderness in the Community: It's Good Business**

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Web Site for the Working Paper on

**The Economics of Wilderness Preservation**  
[Pew Wilderness Center]

**<http://www.umt.edu/econ/papers.htm>**

# **The Local Economic Case Against Wilderness**

**Protecting wildlands locks up commercially valuable resources. This deprives local communities of jobs and income, effectively making them poorer.**

# **The Local Economic Case Against Wilderness**

**Protecting wildlands locks up commercially valuable resources.**

**It also blocks motorized recreation and other recreational developments. Reducing the number of tourists and the volume of recreational activity.**

**This deprives local communities of jobs and income, effectively making them poorer.**

# Two Very Different Meanings of the Economic Value of Natural Landscapes

## The Capacity to Satisfy Needs and Desires

- The economist's definition of economic value
  - scarce resources
  - alternative uses
  - trade-off evaluation is appropriate
- Value to the person enjoying the good, service, or natural resource

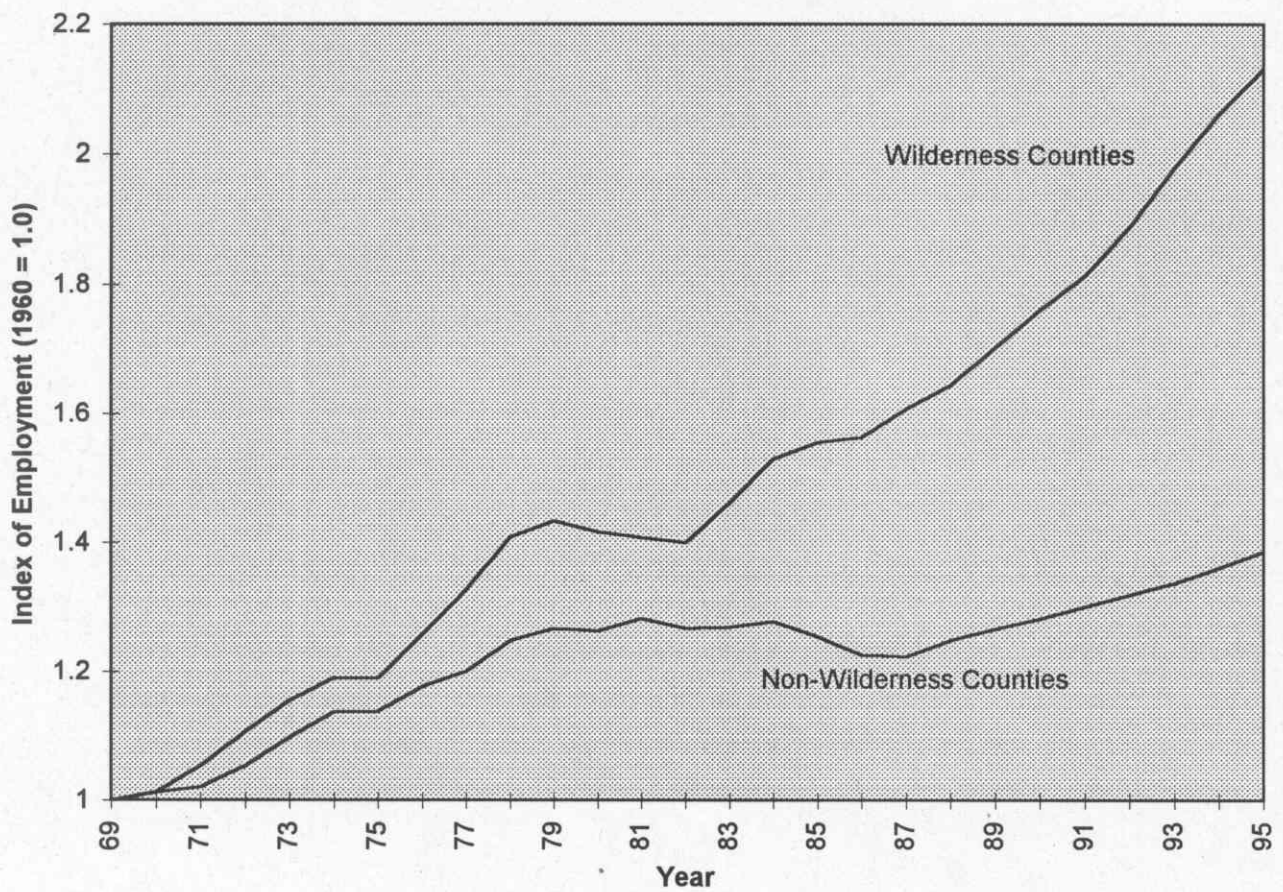
## The Capacity to Attract Economic Activity

- An "economic impact" approach
- Income injected in from the outside
- Additional local jobs and income result
- Tourism and commercial recreation

# **The Economic Claims Implicit in This Local Economic Criticism of Wilderness Protection:**

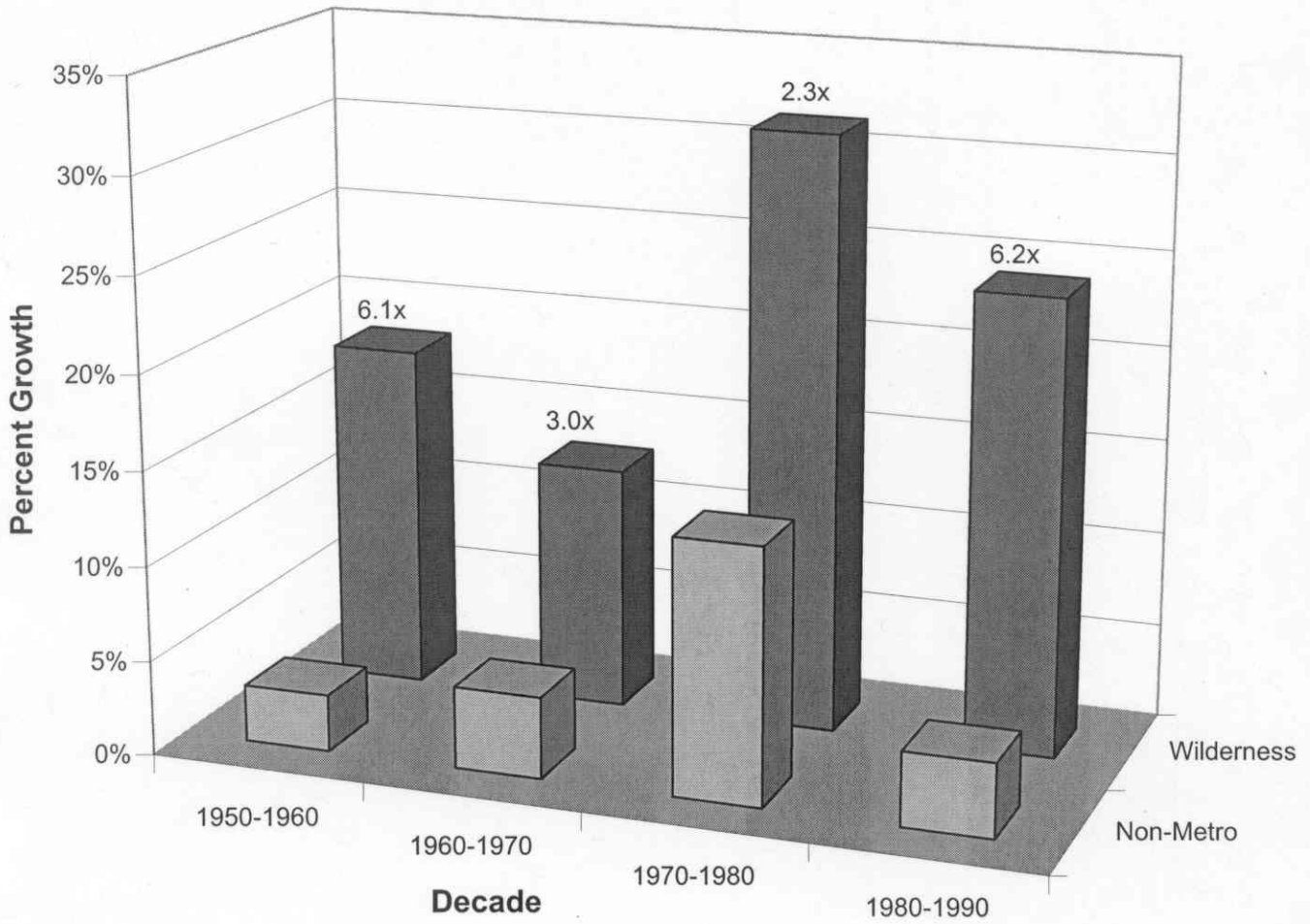
- 1. Areas adjacent to protected landscapes will have relatively depressed, declining economies.**
- 2. Areas whose lands are unconstrained by environmental restrictions on mining, logging, and motorized recreation will have relatively prosperous, expanding economies.**
- 3. At the very least non-wilderness counties will out perform wilderness counties.**

### Growth in Employment: Montana Wilderness and Non-Wilderness Counties



Source: US Dept. of Comm, BEA, REIS  
T.M. Power

### Population Growth in Non-Metro and Wilderness Counties



Source : Gunders Ruzicis  
 Geography, U of ID  
 in Mc Cool, Stephen F., et al  
 Wilderness Science in a Time of Change, RMRS-P-15-Vol. 2, US Forest Service, Ogden, UT  
 2000, p. 15

**Economic Vitality in the Regions Surrounding 22 Large National Parks  
All Counties Associated with National Parks Greater Than 250,000 acres**

Measure of Economic Vitality	Percentage Change		Percentage Change Relative to US	
	89-98	69-98	89-98	69-98
Population	24%	135%	2.5	3.9
Jobs	34%	205%	2	2.7
Aggregate Real Income	37%	255%	1.7	2.2
Real Per Capita Income	11%	52%	0.9	0.9

Source : T.M. Power  
Economic Impact of the Proposed Haino Woods National Park, 2001

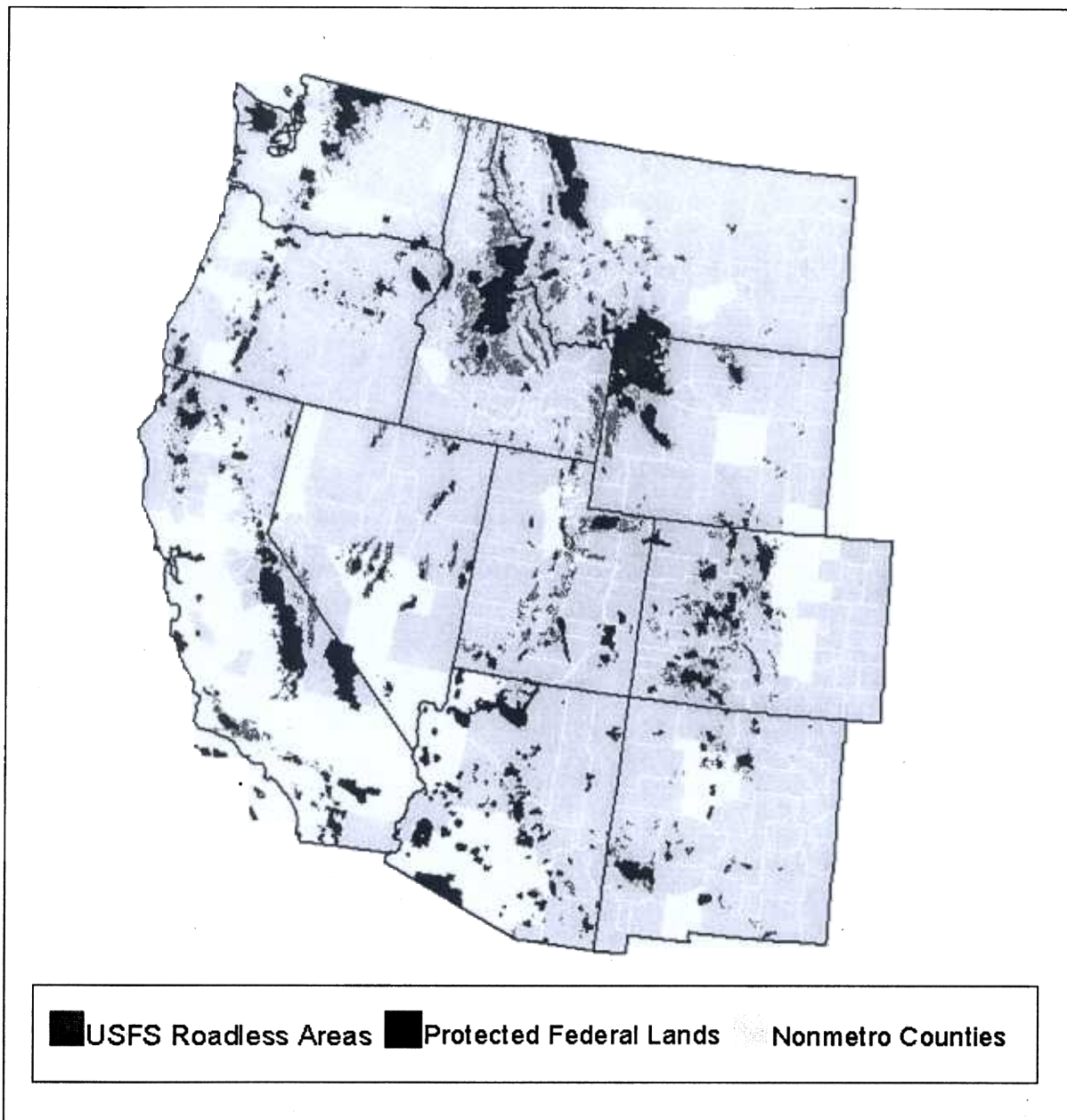


Measure of Economic Vitality Growth in	Simple Correlation Coefficient % Wilderness in Large National Parks and Local Economic Vitality	t Statistic	Statistical Significance Level
Population 89-98	0.37	1.77	91%
Population 69-98	0.36	1.75	91%
Jobs 89-98	0.24	1.10	71%
Jobs 69-98	0.25	1.14	73%
Total Real Income 89-98	0.25	1.15	74%
Total Real Income 69-98	0.31	1.45	84%
Real Avg Income 89-98	-0.03	-0.12	9%
Real Avg Income 69-98	0.00	-0.02	2%

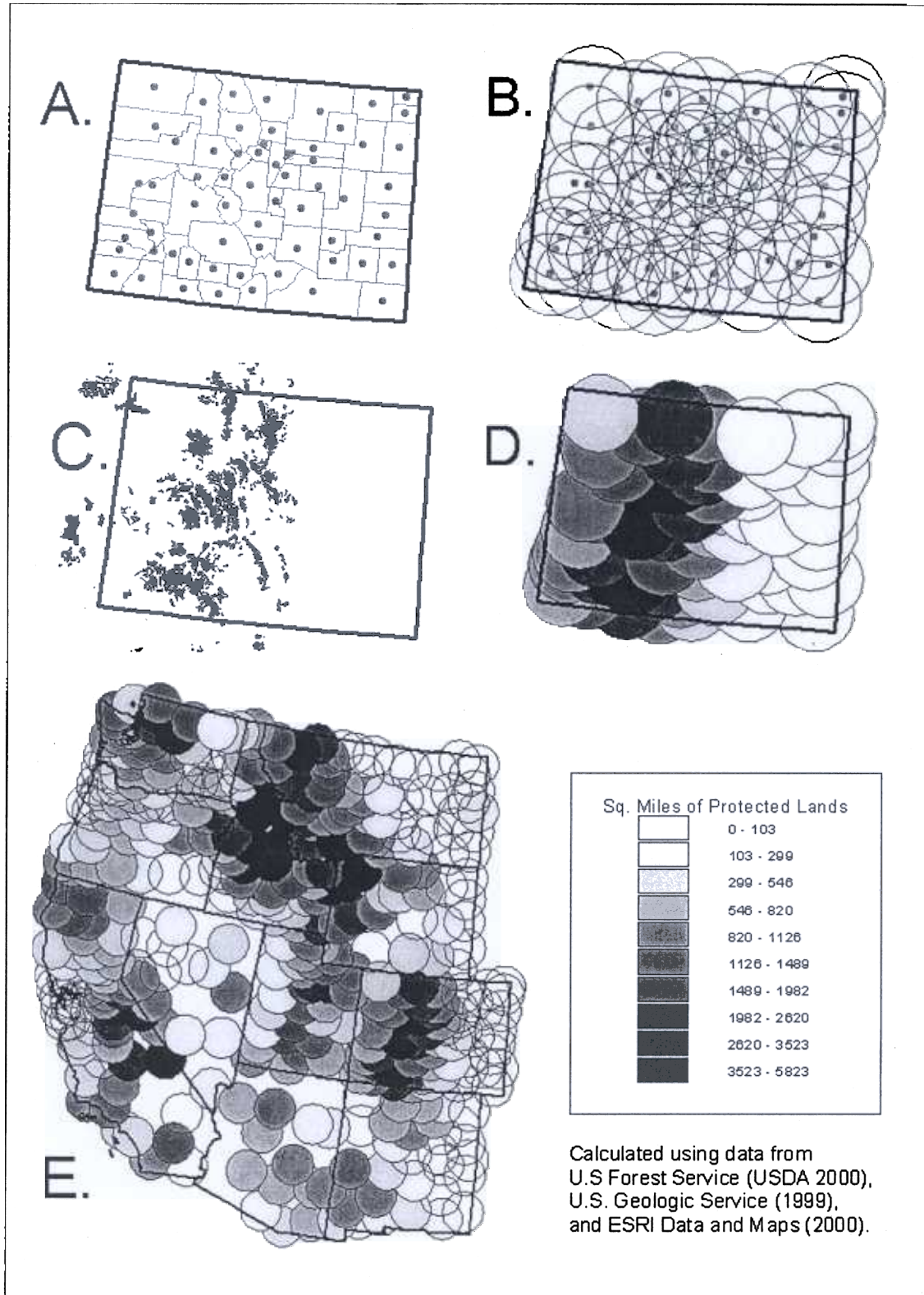
Source: T. M. Power, Maine Woods NP Paper Analysis, Nov. 2002, Npctny.xls, m58

All proposed and designated wilderness acres included.

Source: T.M. Power The Economic Impact of the <sup>Proposed</sup> Maine Woods National Park, 200

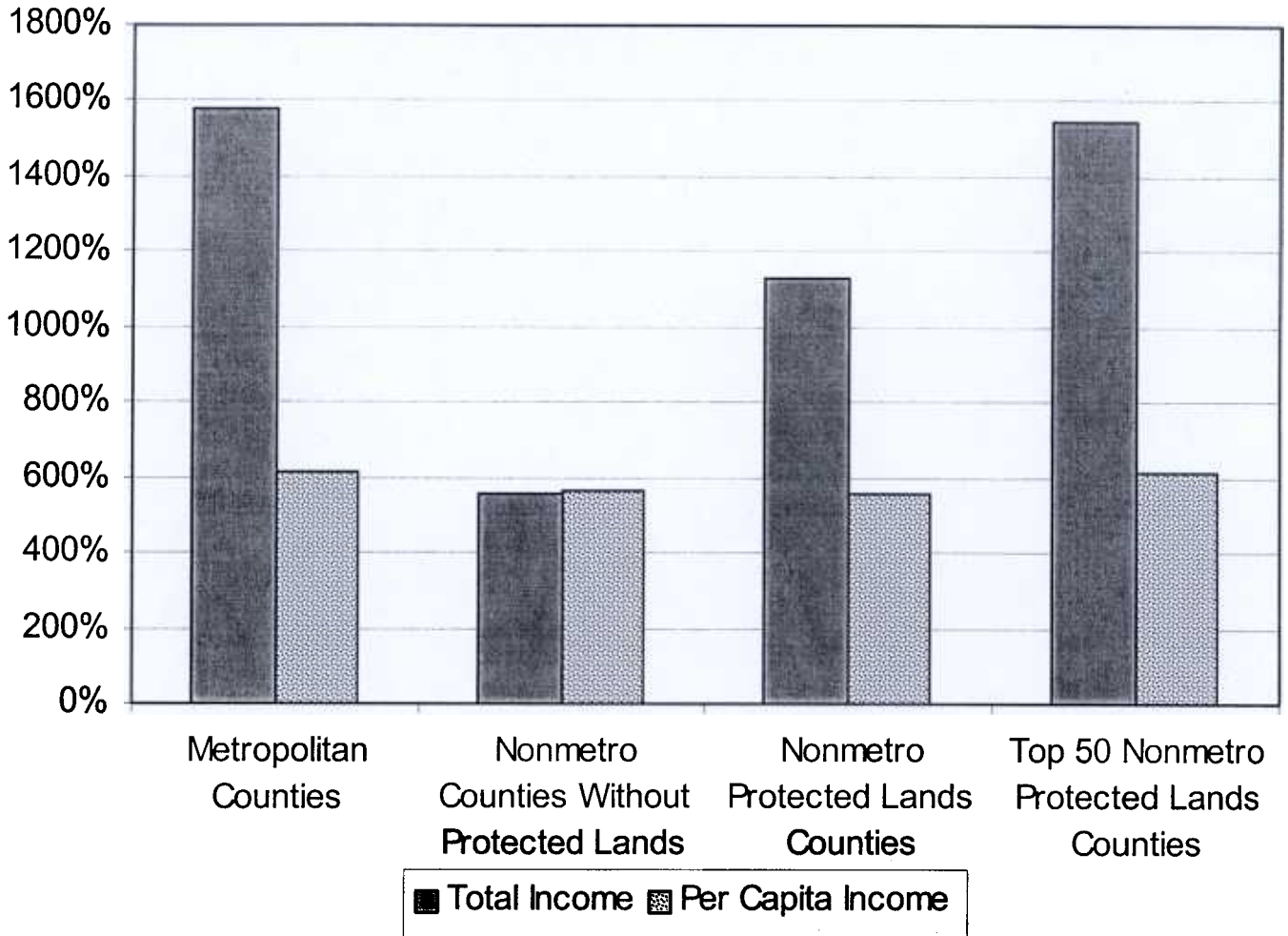


Paul Lorah, Geography, Univ. of St. Thomas  
in McCool, Stephen F. et al. Wilderness Science in a Time of Change  
RMRS-P-15 - Vol 2, US Forest Service, Ogden, UT, 2000



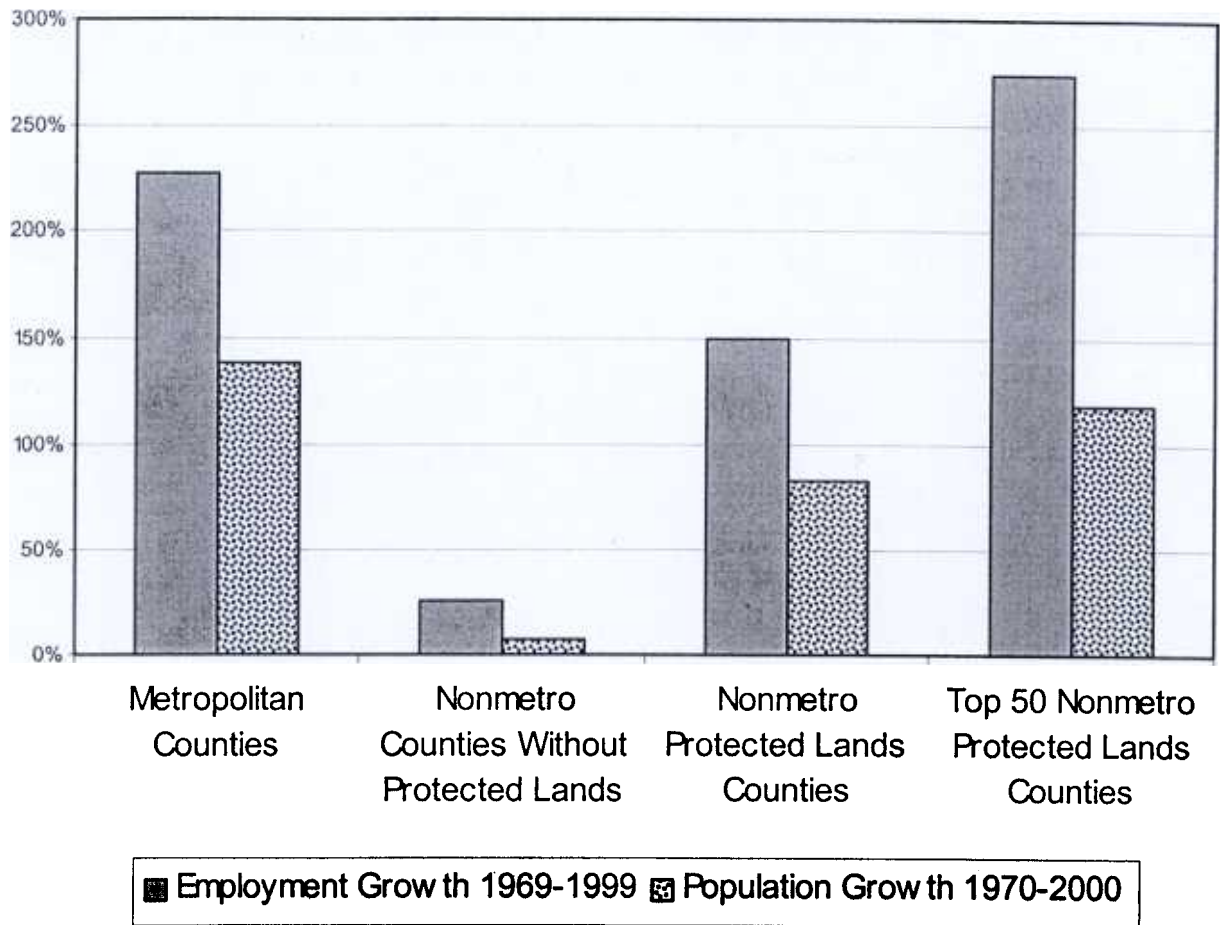
Paul Lovah, Geography U. of St. Thomas  
 "Environmental Protection + Populations Change in the Western US"  
 2002

## Relative Income Growth in the 11 Western States 1969 - 1999



with/without  
Level, sp cit

## Population & Employment Growth in the 11 Western States



*with/without*

*Lorrah, op.cit.*

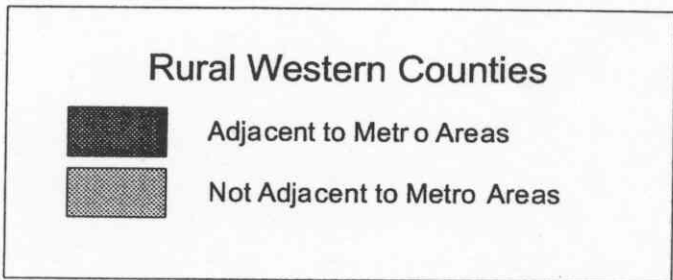
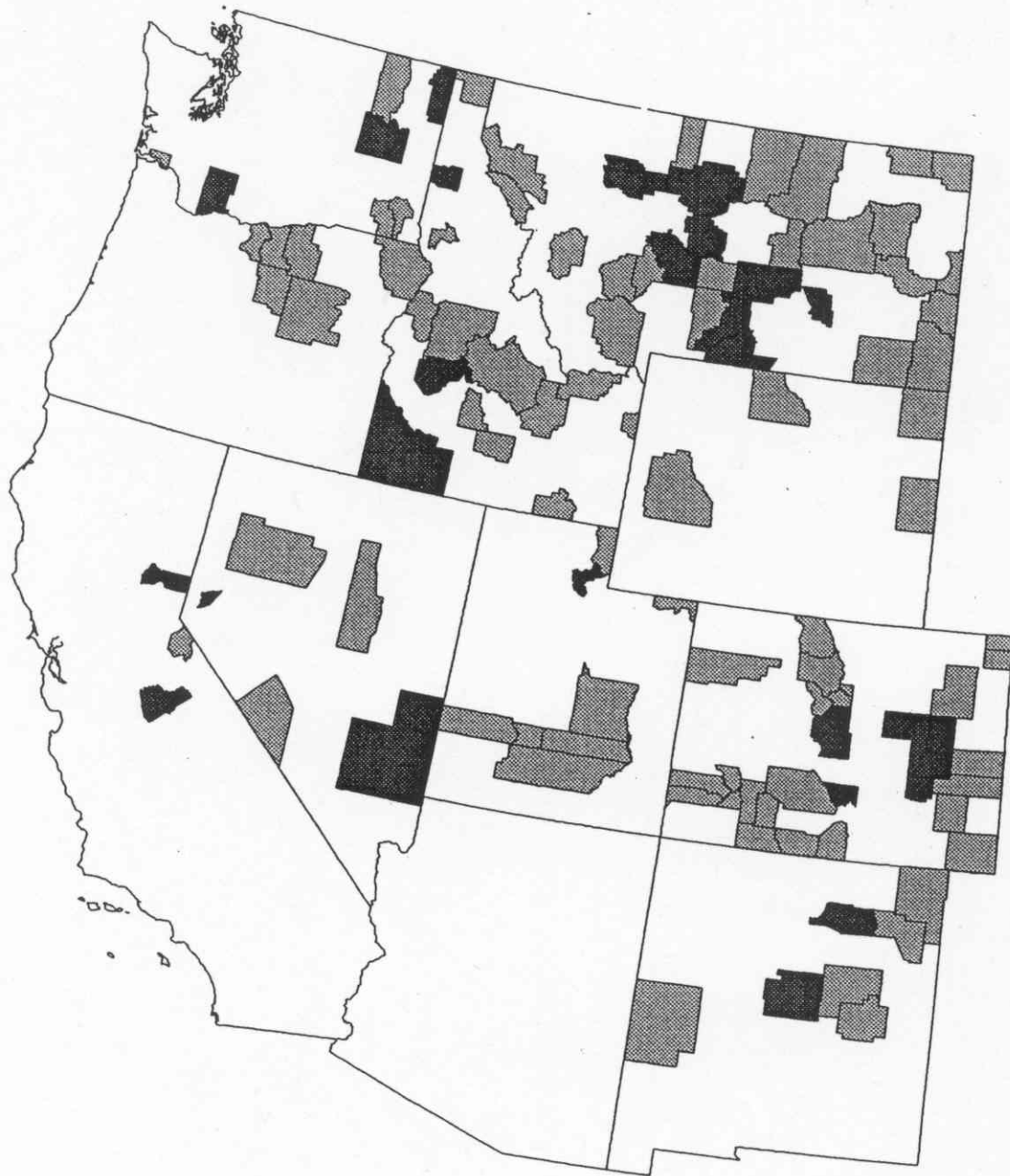
**The Correlation between the Amount of Protected and Unprotected Federal Lands within 50 Miles of a County's Center, Non-Metropolitan Counties NOT Adjacent to Metro Counties, Western States**

	Population Growth 1970-1990	Employment Growth 1969-1999	Aggregate Income Growth 19690-1999	Per Capita Income Growth 19690-1999
Protected Federal Lands	<b>0.33**</b>	<b>0.30**</b>	<b>0.30**</b>	<b>0.19**</b>
Unprotected Federal Lands	<b>0.23**</b>	0.19	0.18	0.10

\*\*Bold = Statistically Different from Zero

Source: Lorah, 2001

Lorah, op. cit



**Figure 1**—Study area: rural counties in the 11 Western United States.

Lovah, op. cit.

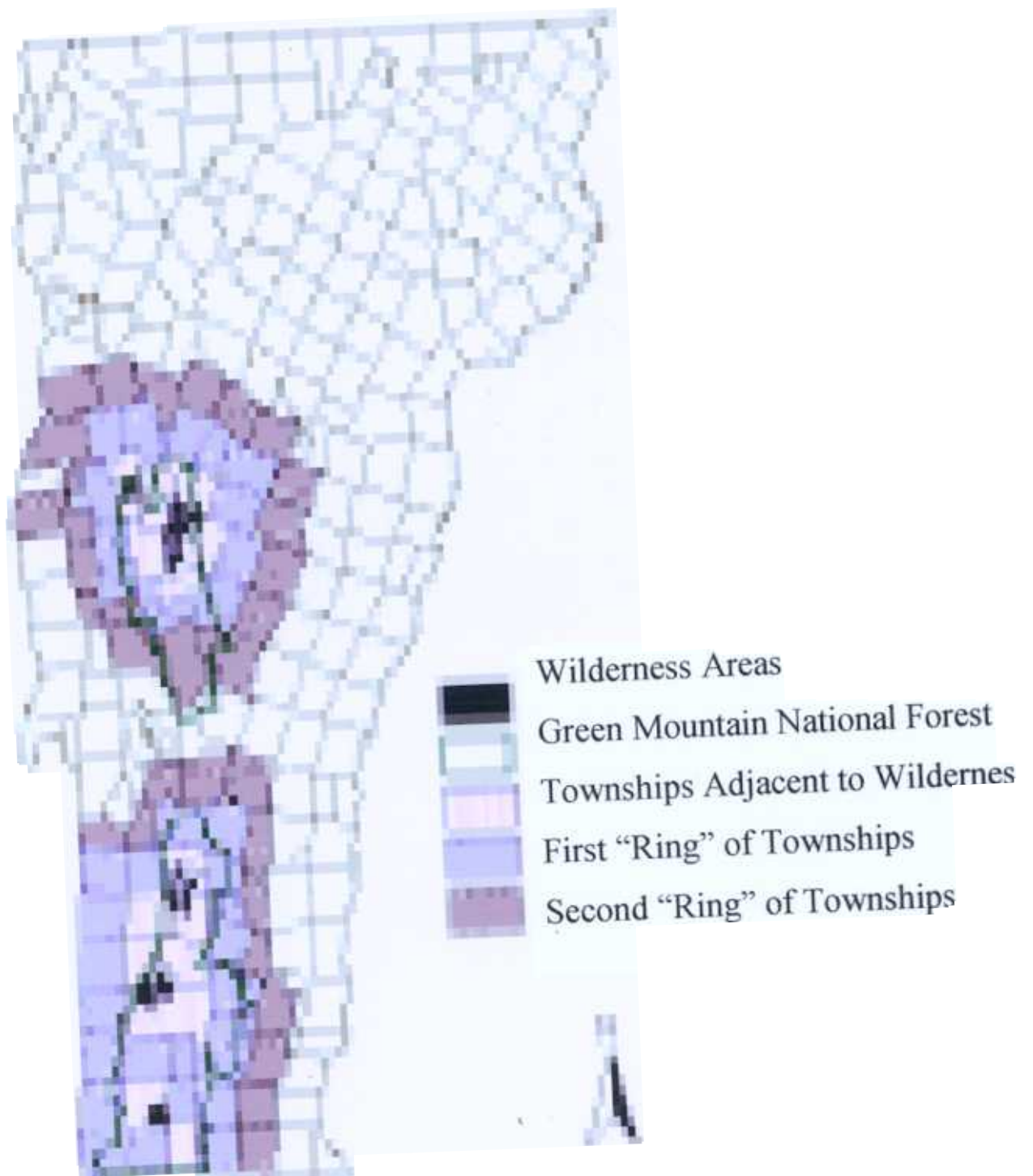
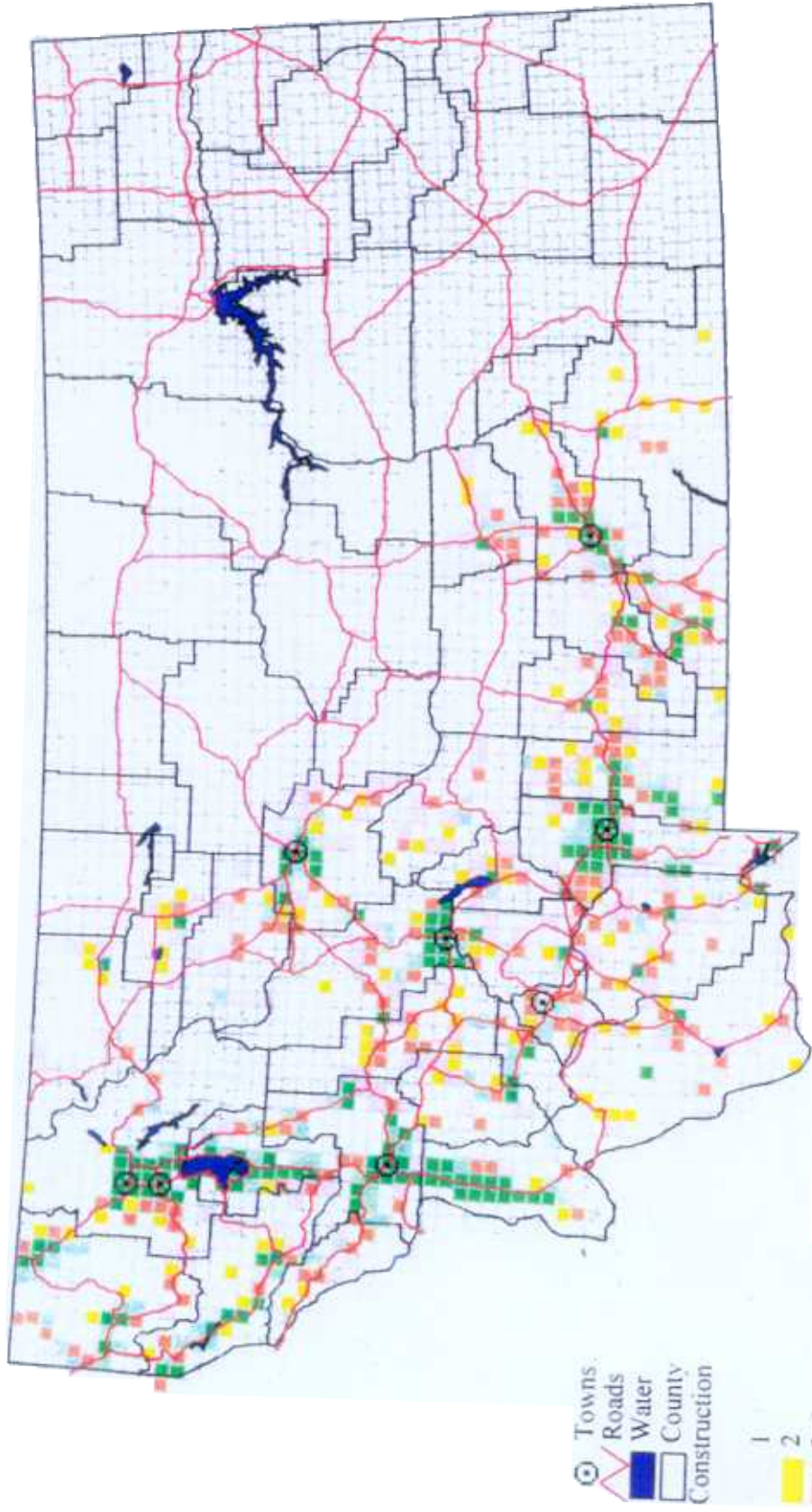


Figure —Study area

Spencer Phillips  
 in MacCull, Stephen F., et al.  
 Wilderness Science in a Time of Change  
 RMRS - P-15 - VOL-2  
 US Forest Service, Ogden, UT 2000



# Construction Per Township 1990-94



Figure

David Jackson and Ken Wall  
UMT School of Forestry  
Discussion Paper #2, 1995  
Boile Center for People + Forests

# The Economic Role of Natural Landscapes

“Tourism”

Attracting Temporary Visitors

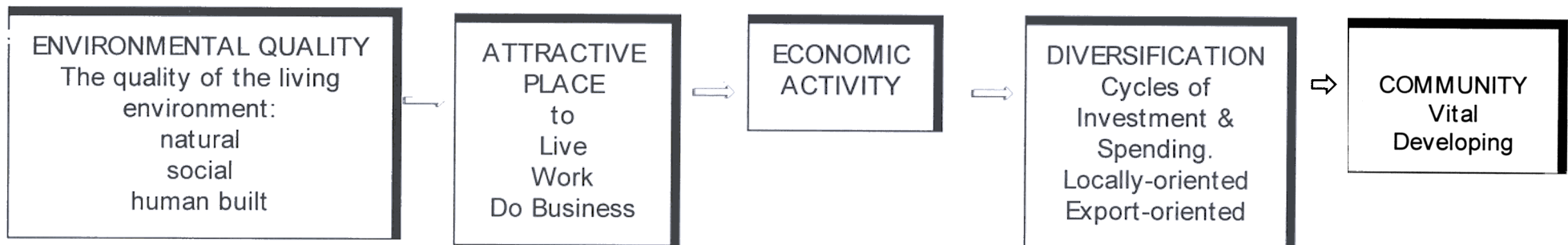
versus

“Local Amenities”

Site-Specific Natural, Cultural, and  
Social Qualities

Holding and Attracting Permanent  
Residents

# An Environmental View of the Economy

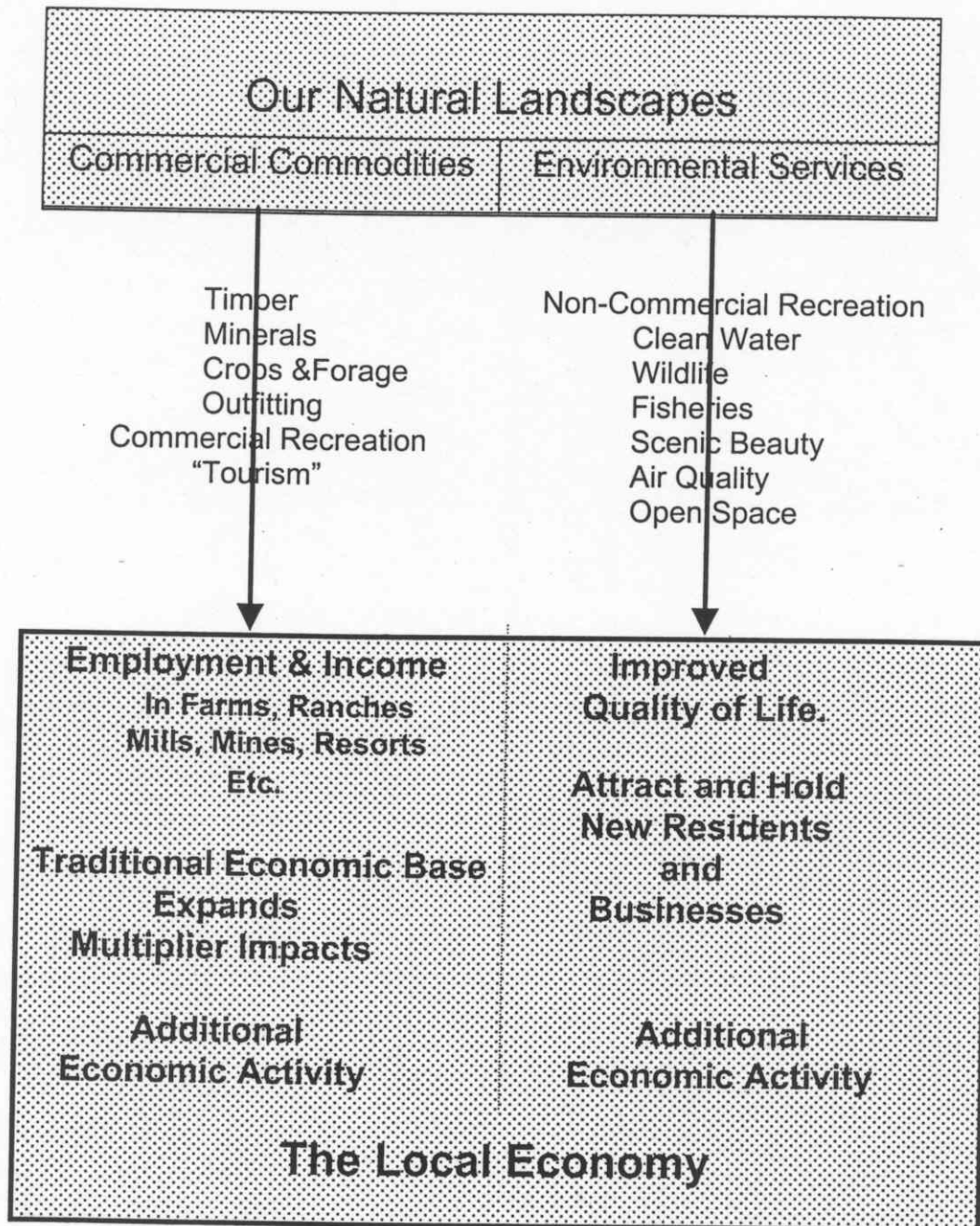


Natural environment  
Recreation Opportunities  
Cultural Richness  
Cost of Living  
Community/Neighborhood  
Security  
Quality of Public Services

Seeking to Live & Work  
Enhanced Labor Force  
high quality  
lower cost  
attracts business  
Retirement Income

On-going Economic  
Development

# The Changing Role of Natural Landscapes in Local Economies



Thinking about local Econ

## Conclusions

- **Rapid, uncontrolled, economic growth in adjacent communities is NOT good for Wilderness, National Parks, or Roadless Areas.**
- **I am NOT singing the praises of this rapid growth adjacent to protected landscapes.**
- **I am responding to the anti-wilderness claim that protecting natural landscapes damages local economic vitality, pitching rural areas into economic depression. That claim is not supported by the facts. The opposite is more likely to be true.**
- **There are two important economic points here:**
  - i. Protected natural landscapes are important to people's well being. This is demonstrated by their willingness to make sacrifices in pursuit of access to them.**
  - ii. Protected natural landscapes appear to stimulated local economic vitality rather than retard it.**

**EXCERPT FROM**

**The Economics of Wildland Preservation**

<http://www.umt.edu/econ/papers/Wildland%20Economics%20Report.htm>

a report prepared for the

**Pew Wilderness Center**

by

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## **The Impact of Wildland Preservation on Local Economic Vitality**

Economic research has repeatedly demonstrated that areas with high quality natural environments that are protected by official wilderness or park status have been able to attract higher levels of economic activity. As a result, those areas show signs of superior economic vitality. Much of that research has centered on the Western United States because of the concentration there of many of the larger National Parks and wilderness areas, but other areas of the nation including the Northern Forests of the nation's north eastern tier have also been studied. Other studies are national in scope.

Statistical analysis of the economies of all of the counties of the Western states showed that higher percentages of county land protected by National Park, National Monument, and National Wilderness System status were associated with higher rates of employment growth between 1969 and 1997. Even when only the more rural (non-metropolitan) Western counties were considered, those counties with more than ten percent of their land in National Parks, Monuments, and Wilderness saw job growth 1.85 times the average for Western non-metropolitan counties; income grew 1.43 times faster. The correlation between the amount of National Park, Monument, and Wilderness within 50 miles of a rural Western county's center was positively correlated with both income and employment growth for both the 1969-1997 and 1990-1997 periods. Finally, unprotected wildlands that have yet to face roaded development also appeared to attract economic activity. The acreage of US Forest Service inventoried roadless areas within 50 miles of a county's center was also positively correlated with employment and income growth. The strength of that correlation increased as the analysis shifted from all counties to just the non-metropolitan counties (i.e. no cities larger than 50,000) to the purely rural counties (i.e. no cities greater than 2,500) of the Western states.<sup>1[2]</sup>

Analysis of economic development in rural counties near large Wilderness areas has found that population growth in those counties is somewhat higher than the growth rate for either the state as a whole or the major urban areas in the state. During the 1990s, the advantage of the rural wilderness counties over the state and urban averages expanded.<sup>2[3]</sup> Another researcher found similar results for the Rocky Mountain West even when he focused on truly rural counties, those that had no communities with more than 2,500 residents. That study included as federally protected natural areas not only federal Wilderness Areas but also National Parks and National Monuments. Relatively high correlations ( $r = .5$ ) were found between measures of the relative importance of these protected national lands as a percentage of total county land and several measures of economic vitality: employment, per capita income, total aggregate income,

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<sup>1[2]</sup> Southwich Associates, 2000, Historical Economic Performance of Oregon and Western Counties Associated with Roadless and Wilderness Areas, pp. 19 and 24. The correlation coefficients for the most rural counties (no city greater than 2,500) were 0.33 and highly significant. The correlation was also significant for all Western counties as well as all Western non-metropolitan counties. The state included were Montana, Wyoming, Colorado, New Mexico, Idaho, Utah, Arizona, Nevada, California, Oregon, and Washington.

<sup>2[3]</sup> Booth, Douglas E. 1996. Economic Development Near Big Wilderness in the Western U.S. Unpublished working paper, Economics Department, Marquette University, Milwaukee, WI.

and population growth.<sup>3[4]</sup> That is, in rural areas with only small cities and towns, the more of the land base that was in National Wilderness, Parks, Monuments, etc. the higher were the measures of local economic vitality.

Rudzitis has also shown that federal protection of landscapes through National Parks and Wilderness designations does not slow local economic growth. In fact, such protection was associated with growth rates two to six times those for both other non-metropolitan areas and two to three times those of metropolitan areas over the 1960-1990 period. His research clearly indicated that the protected lands drew new residents who were willing to sacrifice a certain amount of income in order to live in the higher quality natural environments that they perceived federal protected landscapes provided.<sup>4[5]</sup>

Researchers puzzled by the growth of population in Western Montana despite low wages and incomes studied the location of new residential housing to determine what locational characteristics explained the decisions homebuilders were making. They found that the closer a location was to a designated Wilderness Area, the higher the likelihood of new construction. The same was true of National Parks. Distance to Montana's larger population centers and access to major highways was also important. These new homeowners want to live near protected natural areas but also value ease of access to trade centers and regional airports.<sup>5[6]</sup> Another economist seeking to understand the spatial patterns of economic development in the rural Mountain West also focused on the tension between access to urban areas and closeness to protected natural areas. In this case the focus was on urban centers that were *not* within commuting distance. He also found that the presence of a National Park led to faster rates of both employment and population growth but that growth decreased with distance from a metropolitan area. So, again, people seek to have their cake and eat it too: enjoy the protected natural landscapes but maintain at least some loose links with metropolitan areas.<sup>6[7]</sup>

The impact of protected landscapes on the attractiveness of areas as residential locations has also been documented in New England as well as in other regions. A statistical analysis of the value of over 6,000 land parcels that were transferred in

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<sup>3[4]</sup> Lorah, Paul. 2000. Population Growth, Economic Security, and Cultural Change in Wilderness Counties. In, Cole, David N. et al., ***Wilderness Science in a Time of Change Conference***. RMRS-P-15-CD, Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.

<sup>4[5]</sup> Rudzitis, Gundars and Rebecca Johnson. 2000. The Impact of Wilderness and Other Wildlands on Local Economies and Regional Development Trends. In ***Wilderness Science in a Time of Change Conference***, David N. Cole et al. editors. USDA Forest Service, Rocky Mountain Research Station. Proceedings RMRS-P-15-CD. Rudzitis, Gundars. 1996. ***Wilderness and the Changing American West***. New York: John Wiley and Sons, Figure 7.1 and pp. 112-116

<sup>5[6]</sup> Jackson, David H. and Kenneth Wall. 1995. Mapping and Modeling Real Estate Development in Rural Western Montana. Discussion Paper No. 2. Bolle Center for People and Forests, School of Forestry, University of Montana, Missoula, MT, 59812.

<sup>6[7]</sup> Booth, Douglas E. 1999. Spatial Patterns in the Economic Development of the Mountain West. ***Growth and Change*** 30(Summer):384-405.



Vermont's Green Mountains revealed that the existence of designated federal Wilderness enhanced nearby land values. Parcels of land in towns near designated Wilderness sold at prices 13 percent higher than in towns not located near Wilderness. Land prices decreased by 0.8 percent with each kilometer of distance away from the nearest Wilderness Area boundary.<sup>7[8]</sup>

A recent University of Maine analysis of migration patterns in the Northern Forest region of the United States confirms the positive impact on in-migration of public lands dedicated to conservation. The study looked at rural forested counties in northern Maine, New Hampshire, New York, Michigan, Wisconsin, and Minnesota. It sought to determine what impact increased concentrations of public "conservation lands" had on in-migration and employment in these rural forested counties. Conservation lands included national and state forests, national and state parks, and public wildlife refuges. The focus was on the 1990-1997 time period during which timber harvests on federal lands declined dramatically as conservation objectives increasingly limited commodity production. The study, like many others, found that, in general, jobs were following people's residential location decisions rather than people passively moving to where employment opportunities were. In addition, the more of a county that was publicly-owned land managed for conservation objectives, the higher was the rate of economic growth: An 11 percentage point increase in the share of the county that fell into the conservation land category led to a one percent point increase in the net in-migration rate. That enhanced in-migration then had an indirect impact on employment that was similar in size: a ten percentage point increase in the share of the county that was in conservation lands led to a one percentage point increase in the employment growth between 1990 and 1997.<sup>8[9]</sup> Given that timber harvests were falling on federal conservation lands during this time period, the **positive** impact of the presence of these lands on in-migration and employment was impressive.

This University of Maine analysis of the impact of public conservation lands also sought to determine if more restrictive protection had a positive or negative impacts on local economic vitality. The more restrictive "preservation" category included federally designated Wilderness Areas as well as National and State Parks. There are no large National Parks in this Northern Forest area. The "preservation" lands category was dominated by the Adirondack State Park in New York and the Boundary Waters Canoe Area Wilderness in Minnesota. The study found that the presence of such more restricted-use public lands had no significant impact on county economies, either positive or negative.<sup>9[10]</sup>

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<sup>7[8]</sup> Phillips, Spencer. 2000. Windfalls for Wilderness: Land Protection and Land Value in the Green Mountains. In *Wilderness Science in a Time of Change Conference*, David N. Cole et al. editors. USDA Forest Service, Rocky Mountain Research Station. Proceedings RMRS-P-15-CD.

Spencer Phillips, 1999, *Windfalls for Wilderness: Land Protection and Land Value in the Green Mountains*, Ecology and Economics Research Group, Wilderness Society, Craftbury Common, VT.

<sup>8[9]</sup> David Lewis and Andrew J. Plantinga, "Public Conservation Lands and Economic Growth in the Northern Forest Region," Department of Resource Economics and Policy, University of Maine, Orono ME 04469, November 17, 2000, p. 29-30.

<sup>9[10]</sup> Ibid. pp. 24-25. Since conservation public lands had a significant impact but the preservation component of those lands did not, it clearly was the less restricted public lands that were responsible for

Counties across the nation containing National Parks and Monuments have also shown impressive economic vitality, including high rates of population, job, and real income growth. A review of all of the large National Parks in the nation over the last 30 years indicates that population growth was almost four times faster than the national average. Job growth was almost 3 times faster. Aggregate real income grew twice as fast as the national average. Over the last 30 years (1969-98) most large National Park counties have experienced robust economic vitality. Eighty-four percent of the large National Park counties had above average population growth; 82 percent had above average job growth; and 80 percent had above average aggregate real income growth.<sup>10[11]</sup>

A study of the impact of *state* parks on employment and population growth in 250 rural Western counties found that state parks also served as an amenity, attracting population and supporting employment growth.<sup>11[12]</sup> A similar analysis of the impact of federal Wilderness Areas and National Parks in the Mountain West found that when a rural county was adjacent to a National Park population growth was higher compared to counties not adjacent to Parks. In addition, there was no negative impact of Wilderness designation on employment or income.<sup>12[13]</sup>

Other researchers have focused on a broader range of local amenities, locally specific qualities that make a location attractive to potential residents. They have included climate, air and water pollution, crime rates, the quality of schools, etc. These studies also confirm that people care where they live and act on those preferences, leading to in-migration and job creation in areas perceived to have higher quality living environments.<sup>13[14]</sup>

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the positive impact. As the study pointed out, much of the preservation restrictions were adopted many decades ago (for Adirondack SP, over a century ago) but the study was focused on the 1990s. The positive (or negative) impact of the restrictions may have been experienced many years earlier. Finally, the period of the study's focus, the 1990s, was a period during which timber harvests on National Forests fell towards zero and the those public lands were managed more for wildlife, recreation, and other environmental values, similar to the way a preservation area would be managed. In that sense, the study confirmed that shifts towards preservation and away from commodity production had positive impacts on local economies, not negative impacts.

<sup>10[11]</sup> Power, Thomas M. 2001. The Socioeconomic Impact of the Proposed Maine Woods National Park and Preserve. A study prepared for RESTORE: The Northwoods, August, ME. The time period was 1969-1998.

<sup>11[12]</sup> Duffy-Deno, Kevin T. 1997. The Effect of State Parks on County Economies of the West. *J. of Leisure Research* 29(2).

<sup>12[13]</sup> Duffy-Deno, Kevin T. 1998. The Effect of Federal Wilderness on County Growth in the Intermountain Western United States. *J. of Regional Science* 38(1):109-136.

<sup>13[14]</sup> Clark, David E and William J. Hunter. 1992. The Impact of Economic Opportunity, Amenities and Fiscal Factors on Age-Specific Migration Rates. *J. of Regional Science*, 32(3):349-365. McGranahan, David A. 1999. Economic Research Service, USDA, Agricultural Economic Report No. 781. Nord, Mark and John B. Cromartie. 1997. Migration: The Increasing Importance of Rural Natural Amenities. *Choices*, 12(3):22-23. Rudzitis, Gundars. 1999. Amenities Increasingly Draw People to the Rural West. *Rural Development Perspectives* 14(2):9-13. von Reichert, Christiane and Gundars Rudzitis. 1994. Rent and Wage Effects on the Choice of Amenity Destinations of Labor Force and Nonlabor Force Migrants: A Note. *J. of Regional Science*, 34(3):445-455.

Some research has focused not on the location decisions made by individuals but those made by business firms. With the shift from goods production to the production of services, in particular knowledge-based services such as those involved in research, insurance, finance, and high technology, more firms have become relatively “footloose.” The success of these companies is less dependent on location than on obtaining the highly qualified personnel they need at a reasonable cost. National Parks and other protected natural landscapes appear to draw economic activity to nearby communities.<sup>14[15]</sup> As a result, natural amenities become an important part of a region’s economic base. As one recent study of the role of environmental quality on the location of high tech firms put it:

Amenities and the environment – particularly natural, recreational, and lifestyle amenities –are absolutely vital in attracting knowledge workers and in supporting leading-edge high technology firms and industries. Knowledge workers essentially balance economic opportunity and lifestyle in selecting a place to live and work. Thus, lifestyle factors are as important as traditional economic factors such as jobs and career opportunity in attracting knowledge workers in high technology fields. Given that they have a wealth of job opportunities, knowledge workers have the ability to choose cities and regions that are attractive places to live as well as work. The new economy dramatically transforms the role of the environment and natural amenities from a source of raw material and a sink for waste disposal to a key component of the total package required to attract talent and in doing so generate economic growth.<sup>15[16]</sup>

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<sup>14[15]</sup> John L. Crompton et al. 1997, “An empirical study of the role of recreation, parks and open space in companies’ (re)location decisions,” *J. of Park and Recreation Administration* 15(1):37-58; J. Johnson and R. Rasker., 1993, “The Role of Amenities in Business Attraction and Retention.” *Montana Policy Review* 3(2):11-19; Ray Rasker, 1994, “A New Look at Old Vistas: The Economic Role of Environmental Quality in Western Public Lands,” *University of Colorado Law Review* 65(2):369-97. Arora, Ashish, Richard Florida, Gary J. Gates and Mark Kamlet. 2000. Human Capital, Quality of Place, and Location. H. John Heinz School of Public Policy at Carnegie Mellon University, Pittsburg, PA. Gottlieb, Paul D. 1995. Residential Amenities, Firm Location and Economic Development. *Urban Studies* 32(9):1413.

<sup>15[16]</sup> Florida, Richard. 2000. **Competing in the Age of Talent: Environment, Amenities, and the New Economy.** H. John Heinz III School of Public Policy and Management, Carnegie Mellon University. A Report Prepared for the R. K. Mellon Foundation, Heinz Endowments, and Sustainable Pittsburgh. Page 5.