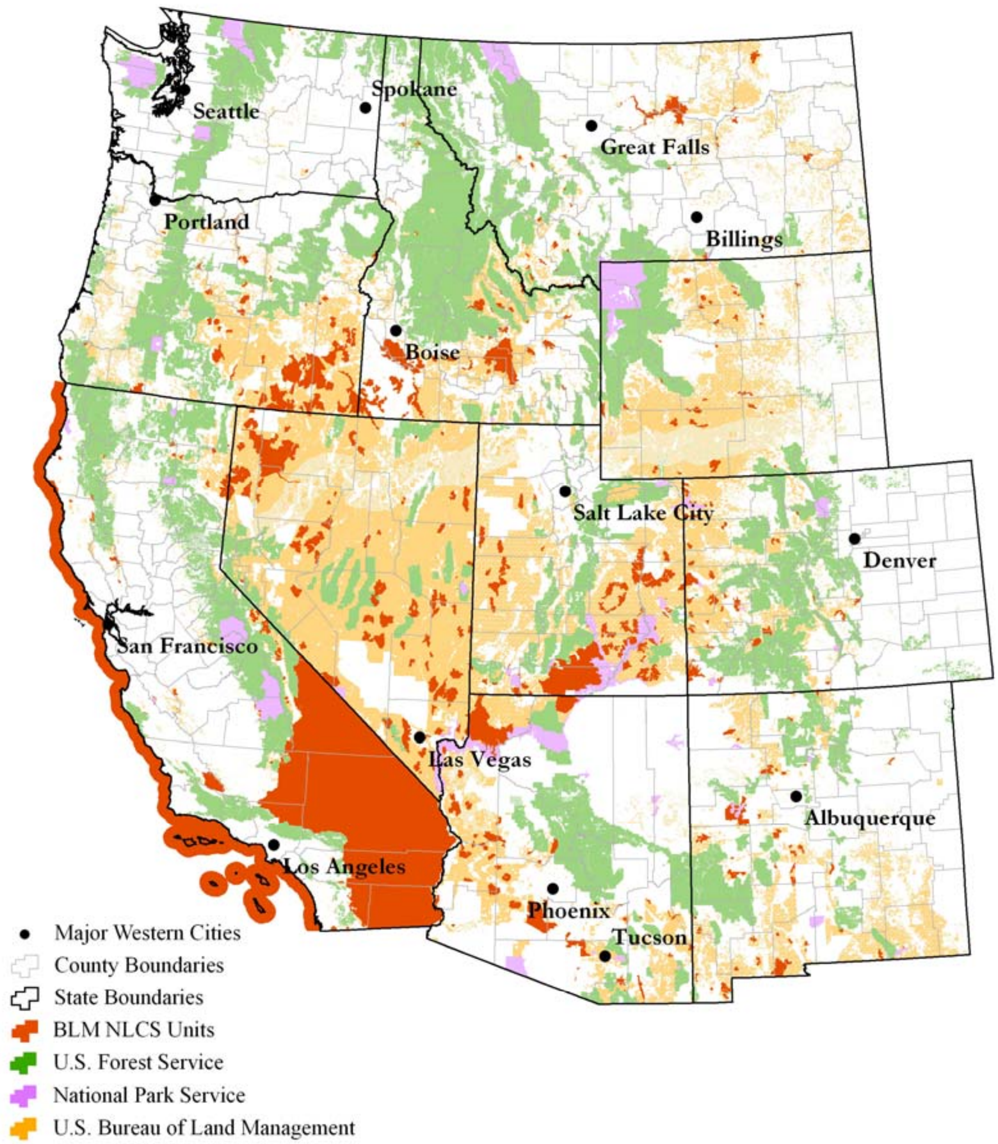
Sonoran Institute

The National Landscape Conservation System's Contribution to Healthy Local Economies



THE NATIONAL Landscape Conservation SYSTEM 5 YEARS

www.discoverNLCS.org

About the Sonoran Institute

A nonprofit organization established in 1990, the Sonoran Institute brings diverse people together to accomplish their conservation goals.

The Sonoran Institute works with communities to conserve and restore important natural landscapes in western North America, including the wildlife and cultural values of these lands. The lasting benefits of the Sonoran Institute's work are healthy landscapes and vibrant communities that embrace conservation as an integral element of their quality of life and economic vitality.

Through community stewardship, the Sonoran Institute contributes to a day when:

- Healthy landscapes, including native plants and wildlife, diverse habitat, open spaces, clean air, and water extend from northern Mexico to Western Canada.
- People embrace stewardship as a fundamental value by caring for their communities, economies, and natural landscapes.
- Resilient economies support strong communities, diverse opportunities for residents, productive working landscapes, and stewardship of the natural world.

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SONORAN INSTITUTE
healthy landscapes vibrant economies livable communities

Cover: Map 1. Public lands in the West

Executive Summary

Created in June 2000, the 26 million-acre National Landscape Conservation System (NLCS) brings together the crown jewels of the Bureau of Land Management (BLM) to conserve, protect, and restore nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations.

As NLCS celebrates its fifth anniversary, there is an ongoing debate about the economic impacts and benefits of various types of public lands management. Public reaction to NLCS designations in the counties and communities where they are located has ranged from resistance to unbridled enthusiasm.

Opinions regarding NLCS designations hinge partially on perceptions of the economic effects of increased public lands protection on local economies. To provide insight into whether NLCS designations have generally had positive or negative effects on the economies of the counties that contain them, the SocioEconomics Program of the Sonoran Institute examined four key economic indicators in the 32 counties that comprise 19 of the most significant NLCS areas.

The study results are generally positive. Twenty-six of the 32 counties experienced significant gains in several economic indicators both before and after designation. Trends in the four indicators examined (total personal income, population, per capita income, and total employment) were generally sustained at about the same pace after designation. These counties are experiencing increases across a range of sectors, including business services, finance and insurance, health care, arts, entertainment and recreation, and non-labor income.

Only three counties showed significant declines in several economic indicators, and three more experienced downturns in total personal income. Further investigation reveals that these four counties lack economic diversity and are highly dependent on a single economic sector such as mining or agriculture, or a single employer such as a hydroelectric plant, and are therefore highly vulnerable to market swings for the commodities they produce.

Our research led to the following conclusions:

1) Counties that have diverse economies, have been able to attract and retain higher-paying jobs in Services and other sectors, have good access to transportation infrastructure, and have educated workforces continue to thrive once NLCS areas are designated.

2) In contrast, counties that have struggled with boom-and-bust cycles, lack transportation access to metropolitan areas, and rely on a single industry continue to perform poorly after NLCS designation.

3) Protected public lands are an important quality of life attribute that may help more dynamic counties attract new residents and businesses.

These findings indicate that protected public lands are part of a successful mix of ingredients that combine to make rural economies vibrant. They also indicate that by themselves protected public lands are not enough to ensure economic growth and prosperity. In other words, protected public lands are a competitive advantage for the West, and when coupled with solid infrastructure and innovative talent, both of which they help stimulate and attract, this combination can result in strong economic growth and vitality.

Introduction

Created in June 2000, the 26 million-acre National Landscape Conservation System (NLCS) includes National Monuments, National Conservation Areas, Wilderness and Wilderness Study Areas, Wild and Scenic Rivers, and National and Scenic Trails. While some of these areas were set aside for special protection before 2000, the NLCS brought together under one system these crown jewels of public lands administered by the Bureau of Land Management (BLM).

The NLCS mission is to conserve, protect, and restore nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations. The NLCS did not create any new legal protections, nor did the system bring any new lands under federal management. As with other lands administered by the BLM, multiple uses are allowed on NLCS lands, but the mix of uses depends on the area's resources and the purposes stated in the designation language. NLCS lands generally emphasize values such as conservation, open space, and recreational opportunities, and serve to "protect the hidden treasures of the American West."

The debate about the economic impacts of various types of public lands and their management has continued for decades, and has gained an added dimension with the creation of the NLCS. Public reaction to NLCS designations in the counties and communities where they are located ranges from unbridled enthusiasm to grudging acceptance to outright rejection.

Responses from those closest to NLCS areas often hinge on perceptions of what the NLCS designation has meant to local economies and what the effects are likely to be in the future. This report delves into these issues by answering the question:

What is the economic impact of designating National Monuments, National Conservation Areas, or Cooperative Management Protection Areas?

The inspiration for this report comes from two other Sonoran Institute publications, *Public Lands Conservation and Economic Well-Being* and *Prosperity in the 21st Century West: The Role of Protected Public Lands* (hereinafter, the *Prosperity* reports). These reports use statistical analysis to examine correlations between various types of protected public lands and economic growth in all 413 counties in 11 Western states (excluding Alaska and Hawaii). The reports conclude that Wilderness, National Parks, National Monuments, and other protected public lands, set aside for their wild land characteristics, can and do play an important role in stimulating economic growth—and the more protected the better. We also found that there are many other important pieces of the economic development puzzle, and that not all communities benefit equally from protected lands. Access to metropolitan areas, via road and air travel, is also extremely important, yet some rural communities are remote and isolated. The education level of the workforce, in-migration of newcomers, and a number of other factors allow some areas to flourish and to take advantage of protected lands as part of an economic development strategy. Communities without these economic assets, in spite of being surrounded by spectacular scenery, tend to struggle to keep people and businesses from leaving.

We used three methods for investigating the economic impact of NLCS designations on county economies. In the first we classified counties based on their population and transportation access to metropolitan areas to determine whether size and location affected economic growth. We then looked at long-term economic trends to determine whether performance of a local economy changed after the designation of an NLCS unit. We then produced case studies to draw on qualitative data, such as interviews with local residents, media reports, county and community websites, and other sources to round out the picture of what the creation of the NLCS has meant to various county economies.

We found that county economies that were doing well before NLCS designation continued these positive trends, in some cases attracting new residents and businesses that value the increased quality of life offered by protected public lands. Counties with lagging economies, on the other hand, tended to have easily identifiable reasons for their struggles, and the establishment of new protected areas by themselves were insufficient to turn around longer-term economic declines—at least in the relatively short period since NLCS designation. Each of the six counties identified as having declining personal income or other indicators depended heavily on a single sector or employer; five out of the six are rural counties that lack air service. These economies are particularly vulnerable to downturns in the commodity markets, and lack the resiliency that more diverse economies offer.

We therefore concluded:

1) Counties that have diverse economies have been able to attract and retain higher-paying jobs in Services and other sectors, have good access to transportation infrastructure, and have educated workforces continue to thrive once NLCS areas are designated.

2) In contrast, counties that have struggled with boom-and-bust cycles, lack transportation access to metropolitan areas, and rely on a single industry continue to perform poorly after NLCS designation.

3) Protected public lands are an important quality of life attribute that may help more dynamic counties attract new residents and businesses.

These findings indicate that protected public lands are part of a successful mix of ingredients that combine to make rural economies vibrant. They also indicate that by themselves protected public lands are not enough to ensure economic growth and prosperity. In other words, protected public lands are a competitive advantage for the West, and when coupled with solid infrastructure and innovative talent, both of which they help stimulate and attract, this combination can result in strong economic growth and vitality.

Methodology and Results

We selected a total of 19 NLCS areas and the 32 counties that contain them (see Map 2) based on the criteria described below.

We then applied three different types of analysis to better understand the changing economies of the counties and identify possible effects of NLCS designation:

- *"Three Wests" analysis*: Because access to larger markets is a key determinant of economic growth in the West, we classified all Western counties into three different types according to their population, proximity to urban areas, and transportation access. We then separated the study counties from the total, grouped them by classification type, and examined one economic indicator, total personal income, to determine which types of counties with NLCS designations tend to grow the fastest, and which grow the slowest.
- *Before-and-after designation analysis:* We then examined trends in four economic indicators (total personal income, population, per capita income growth, and total employment growth) for the selected NLCS counties over the longer-term (1980-2002) and since designation to determine if designation has had any discernable effects on existing economic trends.
- *Case studies:* We employed a detailed case study approach to provide a clearer picture of why the economies of some NLCS counties are prospering and others are lagging. We took a closer look at four NLCS areas whose county economies are flourishing, and four that are struggling.

The Selection Process

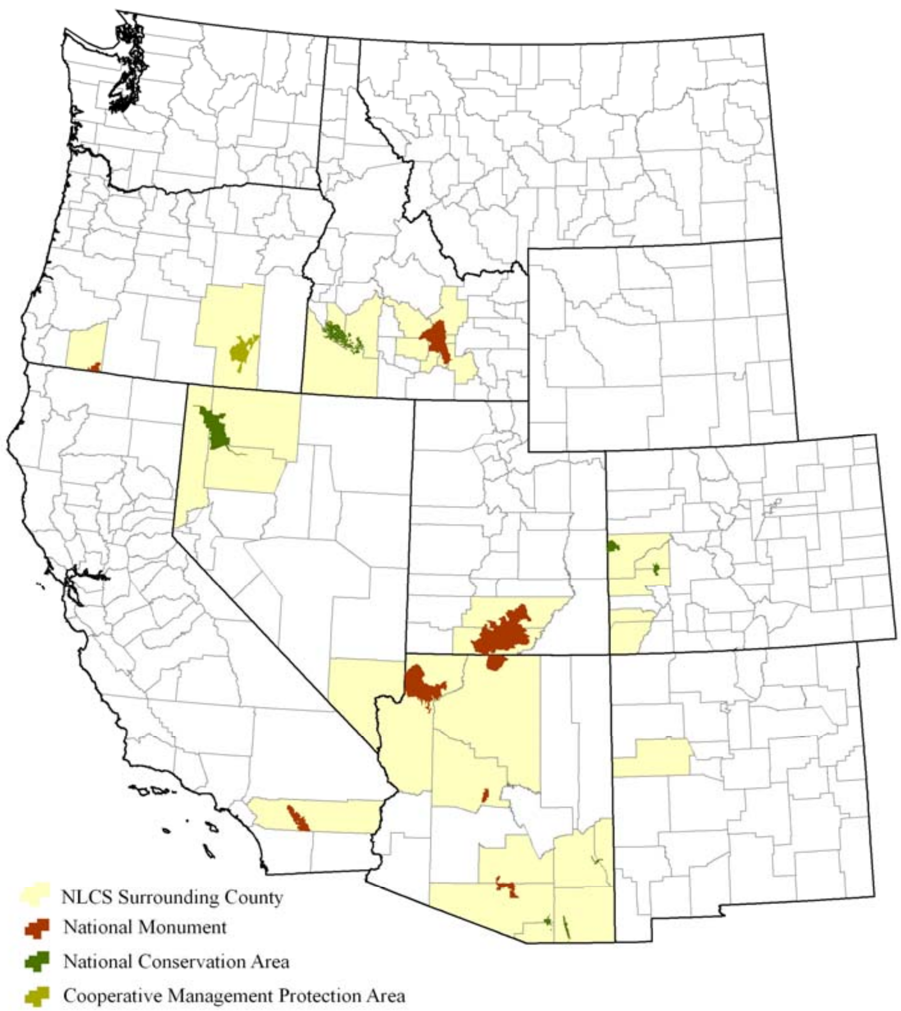
We selected 9 of the 14 NLCS National Monuments and 9 of the 15 National Conservation Areas, along with the system's lone Cooperative Management Area, for a total of 19 units occupying 32 counties. Twelve of these units were designated when the NLCS was officially created in 2000, five were created during the 1990s, and two were created in the late 1980s.

These units were selected out of the 29 National Monuments and National Conservation Areas within the NLCS for three reasons:

First, several areas were added to the system in 2001, including Carrizo Plain, Pompey's Pillar, Upper Missouri River Breaks, Sonoran Desert National Monument, and Kasha-Kituwe Tent Rocks; Sloan Canyon was added in 2002. Since the federal data sources on which this report is based normally have a lag of two years before the data is available, there was not sufficient data available to evaluate the NLCS designations' effects.

Second, three areas that were designated as protected (although not as official NLCS units) before 1987 were excluded from the study because the economy has changed so much since then that making before and after designation comparisons would not have provided much information about how the units might be affecting local conditions today. These units included Steese National Conservation Area, the California Desert National Conservation Area, and King Range National Conservation Area.

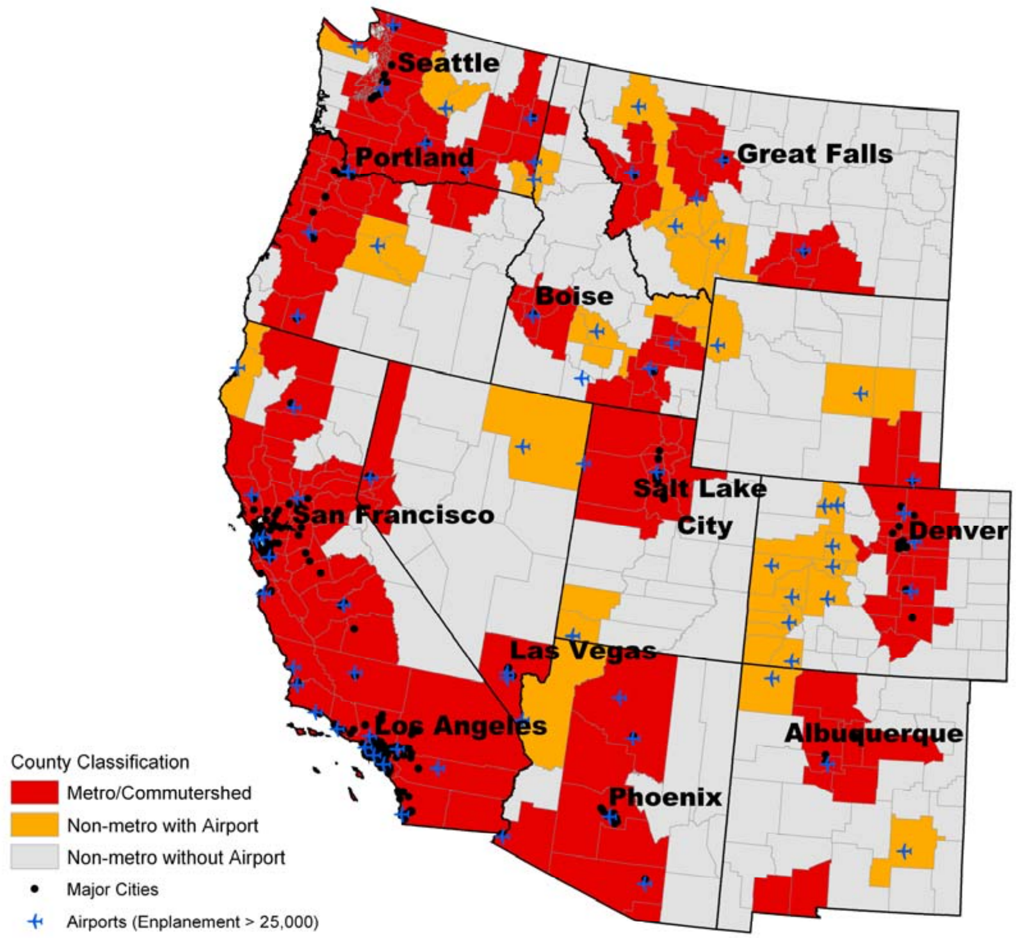
Finally, a few additional units were deemed too small (occupying less than one percent of the county's land base) for possible economic effects to be identified. The Headwaters Forest Preserve occupies only 7,400 acres in northern California (this is also the case with Pompey's Pillar, at 51 acres). We also excluded the California Coastal National Monument because it consists of a string of islands that lack connections to a manageable number of human communities.



MAP 2. NLCS areas analyzed

"Three Wests" Analysis: In the long run, which types of counties are growing fastest?

The first step in evaluating the economic impacts of NLCS designation on BLM lands was to classify the West into separate types of counties from an economic perspective based on their level of access to larger markets. The more detailed statistical analysis of all 413 counties in the West included in the Sonoran Institute's publications *Public Lands Conservation and Economic Well-Being* and *Prosperity in the 21st Century West* (the *Prosperity* reports) found that a county's degree of isolation from larger markets and population centers is an important determinant of economic growth. Using the same methods employed in the *Prosperity* reports, we classified NLCS counties into three types according to their population, proximity to urban areas, and transportation access. Map 3 displays the results.



MAP 3: The "Three Wests," according to road and air travel access to major markets.

Metropolitan or within a metropolitan commutershed: Counties with an urban area with a population greater than 50,000, (a size commonly used by the Bureau of the Census for defining a metropolitan area), or within an hour's drive of such an area (also referred to as "metro/commuter");

Rural with an airport or within an airport commuter shed: Counties with a population of less than 50,000, but having an airport with daily commercial flights and enplanements greater than 25,000 passengers per year[1], or within an hour's drive of such an airport (referred to as "rural with airport");

[1] A cut-off point of 25,000 was influenced by the authors' personal experiences traveling via commercial airplane throughout the West.

Rural without an airport and not within an airport commutershed: Counties more than an hour's drive from metropolitan areas and without easy access to regularly scheduled commercial air service (referred to as "rural without air service").

Analysis of the 32 counties included in this study reveals similar results as those found in the *Prosperity* reports. Table 1 shows that, on average, real personal income grew the fastest in the NLCS counties selected for analysis that are well-connected to larger population centers via roads or air travel. Non-metro counties with airports offering daily commercial service (in orange) saw growth in personal income of 101 percent from 1980 to 2002. On average the metro/commuter counties (in red) grew nearly as rapidly, by 100 percent, from 1990 to 2002.

Counties that grew the slowest—an average of 31 percent—were those that are rural and not connected to metropolitan areas by commercial air service (in gray). Note also that two of the three counties that lost total personal income, and the three others that had declines in multiple other indicators, also fall into this category.

TABLE 1. Changes in real total personal income, 1980 to 2002, for counties potentially impacted by the designation of National Monuments, Conservation Areas, or Cooperative Management Protection Areas in the West.

	1980	2002	% Change 1980 - 2002
Metro/Metro Commutershed			
Yavapai, AZ	1,488	3,989	168
Riverside, CA	17,652	42,733	142
Ada, ID	4,585	11,064	141
Pinal, AZ	1,740	3,828	120
Washoe, NV	6,441	13,534	110
Coconino, AZ	1,450	2,989	106
San Diego, CA	51,592	102,894	99
Pima, AZ	12,122	22,565	86
Santa Cruz, AZ	400	721	80
Santa Cruz, AZ	400	721	80
Jackson, OR	2,930	5,020	71
Power, ID	169	162	-4
Average			100
Non-Metro With Airport			
Blaine, ID	283	923	226
Mohave, AZ	1,119	3,347	199
Montrose, CO	459	856	87
Mesa, CO	2,000	3,217	61
Delta, CO	405	642	58
Elmore, ID	442	662	50
Lincoln, ID	71	91	28
Average			101
Non-Metro, No Airport			
Kane, UT	71	144	102
Cochise, AZ	1,639	2,705	65
Owyhee, ID	144	220	53
Humboldt, NV	259	391	51
Graham, AZ	359	541	51
Pershing, NV	85	110	30
Garfield, UT	79	92	16
Minidoka, ID	351	388	11
Butte, ID	66	67	1
Harney, OR	179	167	-7
Greenlee, AZ	243	163	-33
Average			31

Lost Real Personal Income

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, 2004.

Before and After Designation Analysis: Have economic trends changed much since designation?

We then examined trends in four economic indicators for the selected NLCS counties over the longer-term (1980-2002) and since designation to determine if designation has had any discernable effects on recent economic trends. The indicators (all dollar figures are in real terms and adjusted for inflation to 2002 dollars) we chose to examine are:

- Total personal income
- Population
- Real per capita income
- Total employment

Complete results of this analysis for the 16 counties in NLCS areas that were explored more fully are in their respective case studies. Charts and graphs detailing changes in these four economic indicators are included in the SocioEconomics section of the Sonoran Institute website at www.sonoran.org.

Figure 1 shows the long-term trends in one of these indicators, personal income growth, for the selected study counties potentially impacted by the designation of an NLCS area, from 1980 to 2002. The figure is indexed to begin in 1980 (1980 = 100) to show the relative rates of growth. It shows that over the last 22 years, real personal income grew at a rapid pace in the majority of counties adjacent to the NLCS units.

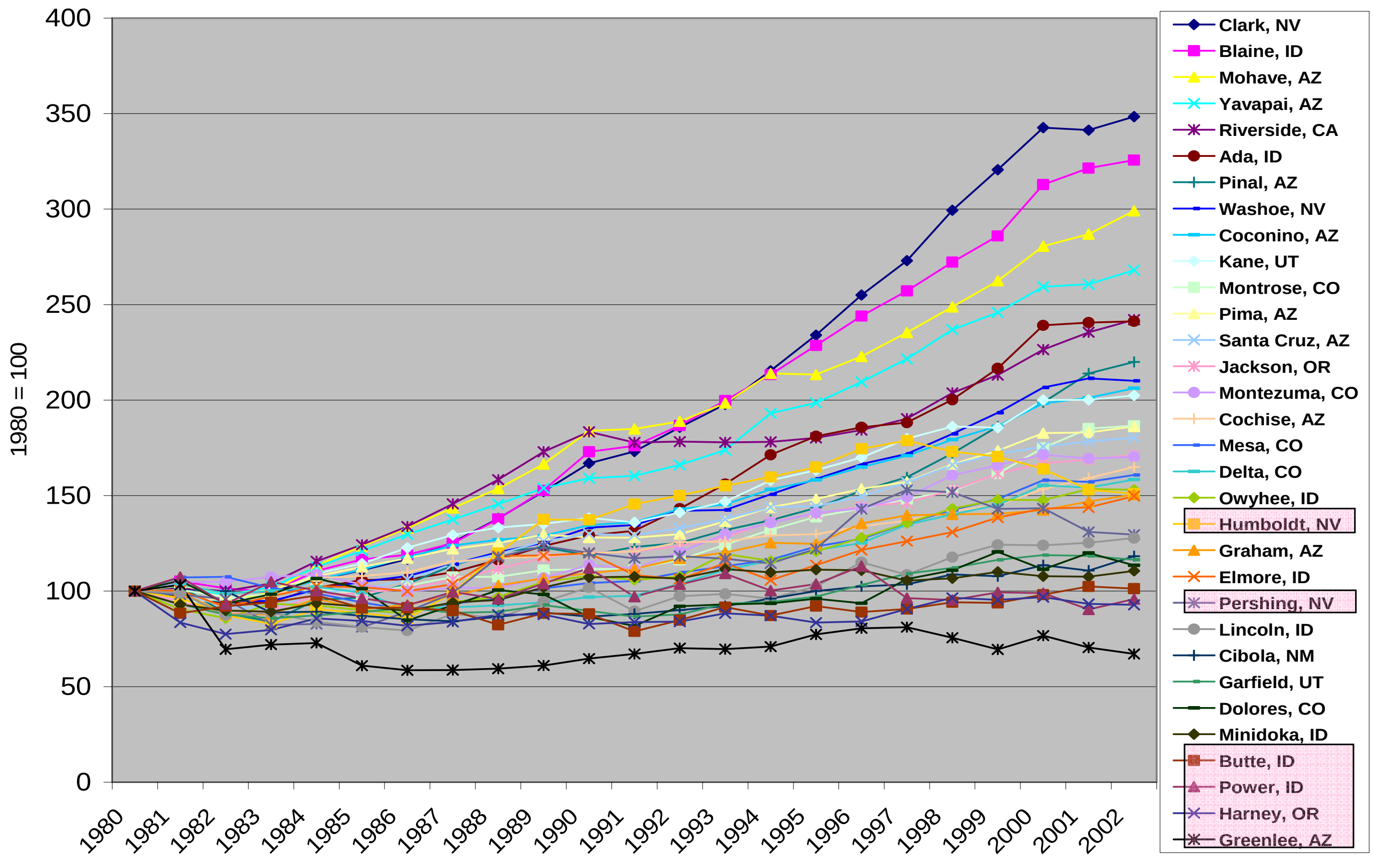


FIGURE 1 Change in real total personal income, 1980 to 2002, for counties in the West potentially impacted by the designation of National Monuments, Conservation Areas, or Cooperative Management Protection Areas on BLM lands.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, 2004.

As Figure 1 also illustrates, only three counties experienced long-term declines in total personal income. These counties are:

- Power County, Idaho (Craters of the Moon National Monument and Preserve)
- Harney County, Oregon (Steens Mountain Cooperative Management and Protection Area)
- Greenlee County, Arizona (Gila Box Riparian National Conservation Area)

To better understand the reasons for these economic declines, the economies of the counties that make up the NLCS areas associated with Power, Harney, and Greenlee counties will be explored in greater detail in case studies.

By including the three other indicators (population, real per capita income, and total employment) in the analysis, we identified three additional counties as having declines in several factors over the long run, or more recently, after designation. They are:

- Humboldt and Pershing counties, Nevada (Black Rock Canyon and High Rock Desert-Emigrant Trail National Conservation Area)
- Butte County, Idaho (Craters of the Moon National Monument and Preserve)

These three counties and the counties previously identified as having declining total personal income are shaded in pink in Figure 1. We therefore also conducted case studies on the NLCS areas that include these counties.

The Case Studies

The case studies of counties with weak economies illustrate that reliance on a single economic sector such as mining (Greenlee, Humboldt and Pershing), logging (Harney), agriculture (Power), or depend heavily on a single employer, such as the hydroelectric plant in Power County, or the Idaho National Engineering and Environmental Laboratory (INEEL) in Butte County does not correlate with economic data. All but one of these counties are rural and lack air service. This degree of economic specialization and lack of easy access makes them vulnerable to fluctuations in the commodities or products that they produce, and means that they lack the resilience to compensate for such downturns.

The pre-existing structure of local economies and relative isolation from larger markets are more significant factors in the decline of these areas than NLCS designation. It is plausible that in time branded landscapes such as NLCS will attract new interest in these areas and begin a process of revitalization similar to the growth and diversification we are seeing in more connected rural areas adjacent to NLCS lands.

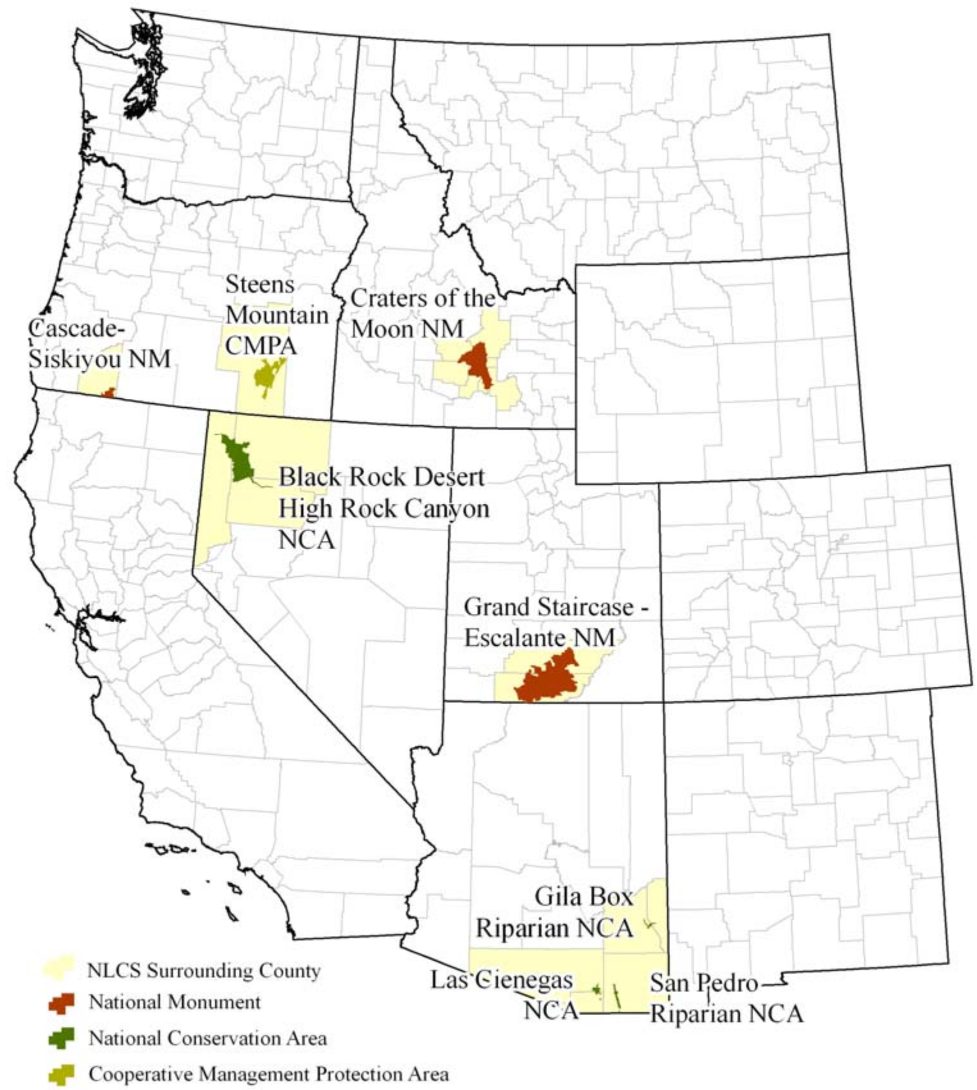
As previously mentioned, some of the case studies focus on the NLCS areas located in counties identified by the other types of analysis as having slower economic growth. These include:

- Craters of the Moon National Monument and Preserve (Power and Butte counties, as well as Blaine, Minidoka, and Lincoln counties, Idaho)
- Black Rock Canyon and High Rock Desert-Emigrant Trail National Conservation Area (Pershing and Humboldt counties, as well as Washoe County, Nevada)
- Gila Box Riparian National Conservation Area (Greenlee County, Arizona)
- Steens Mountain Cooperative Management and Protected Area (Harney County, Oregon)

To provide a balanced look at the role that NLCS areas can play in fast-growing county economies, case studies where economic indicators show positive trends were also included:

- San Pedro Riparian National Conservation Area (Cochise County, Arizona)
- Cascade-Siskiyou National Monument (Jackson County, Oregon)
- Las Cienegas National Conservation Area (Santa Cruz and Pima counties, Arizona)
- Grand Staircase-Escalante National Monument (Kane and Garfield counties, Utah)

The case studies examine more closely the role of NLCS areas in the economies of counties where they are located. They look at issues such as how the structure of jobs and personal income has changed over time, including the effects of reliance on a small number of employers or economic sectors versus those with more diversified economies; the effects of population growth and the potential for sprawl, particularly in light of rapidly changing housing affordability in many areas; and demographic shifts such as increasing numbers of Baby Boomers who are drawn to some areas largely by quality of life factors, which can include protected public lands.



MAP 3. The case studies

The case studies can be found in the SocioEconomics section of the Sonoran Institute website at www.sonoran.org. Appendix 1, which contains complete data for all counties analyzed, can also be found there.