



THE WILDERNESS SOCIETY

**The Carrizo Plain National Monument:  
A Stunning Natural Area Sustaining  
Vibrant Communities**

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## About the Wilderness Society

*The Wilderness Society's mission is to protect wilderness and inspire Americans to care for our wild places.*

The Wilderness Society is a national conservation group dedicated to science-based advocacy. For more than 70 years, our group has worked to conserve America's unparalleled wildland heritage and ensure the wise and balanced management of our public lands legacy.

Headquartered in Washington, D.C., the Society also maintains regional offices throughout the country where our staff address on-the-ground conservation issues linked to local communities. Since spearheading passage of the seminal Wilderness Act in 1964, we have been a leading advocate for every major piece of Wilderness legislation enacted by Congress, work that is supported by an active membership of more than 200,000 committed conservationists. Our effectiveness stems from a team approach to conservation, which links our scientists, policy experts, and media specialists to thousands of grassroots activists—creating a potent force to promote change.

Building the case for land preservation with research and sound science is the key to successful environmental advocacy and policy work. Nearly a quarter century ago, The Wilderness Society helped pioneer strategies that incorporated expert economic and ecological analysis into conservation work. Today, through focused studies, state-of-the-art landscape analysis—and diligent legwork by our many partners who provide us with on-site data—our Ecology and Economics Research Department is able to serve the needs of the larger conservation community.

Legislators, on-the-ground resource managers, news reporters, our conservation partners, and—most importantly—the American people must have the facts if they are going to make informed decisions about the future of this nation's vanishing wildlands. The answers to the pressing legal, economic, social, and ecological questions now at issue are the stepping stones to that understanding and, ultimately, to achieving lasting protection for the irreplaceable lands and waters that sustain our lives and spirits.

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## **Executive Summary**

This report presents the results of a study of the economy of the area around the Carrizo Plain National Monument in California, which consists of Kern, Santa Barbara and San Luis Obispo Counties.

Created by Presidential Proclamation in 2001, the 250,000-acre Carrizo Plain National Monument has only limited evidence of human alteration and is the biological cornerstone for the San Joaquin Valley. Located in eastern San Luis Obispo County and near growing population centers, the Carrizo Plain is a protected refuge for the many endemic and endangered plant and animal species that inhabit the area. The report shows how the local economies are poised to benefit from the presence and protective management of this national treasure.

Research by the Sonoran Institute has found that the strongest economic growth in the rural West is highly correlated with the presence of protected public lands, transportation and communication infrastructure, along with access to larger markets in metropolitan centers, and recreation and scenic amenities. Our report builds from this correlation and applies a set of Regional Asset Indicators developed by the Center for the Study of Rural America at the Federal Reserve Bank of Kansas City along with the factors examined by the Sonoran Institute to the Carrizo Plain Economic Region. These indicators measure characteristics that have been found to correlate with the potential for economic growth in rural counties. They include the presence of human amenities (such as scenery, healthcare and restaurants), skilled workers, innovators and entrepreneurs, as well as the capital and infrastructure to support them.

The report also evaluates the income and employment trends of the regional economies, which show a steady increase in the professional/service sector. This sector is also shown to be the most stable and diverse part of the local economies, even where industries such as energy development or agriculture, play an important role. The strength of the professional/service sector is a key consideration in concluding that the local economies will be able to achieve economic growth – growth that will benefit from the protection of the natural amenities of the Carrizo Plain National Monument.

Finally, the report discusses general data showing the benefits to local economies from recreation and tourism, the benefits associated with protected public lands, and trends in visitation and tourism development for the Carrizo Plain National Monument. The report concludes that the presence and protection of this diverse and unique landscape, taken in conjunction with the specific demographics and economic trends, will contribute significantly to the long term social and economic success of this region.

# **Introduction**

## **THE CARRIZO PLAIN NATIONAL MONUMENT**

Designated as a National Monument in 2001, the 250,000-acre Carrizo Plain National Monument has only limited evidence of human alteration and is the biological cornerstone for the San Joaquin Valley, California. Located in eastern San Luis Obispo County and dramatically bisected by the San Andreas Fault zone, it is the largest undeveloped remnant of this ecosystem, providing habitats that are essential to the long-term survival of the many endemic and endangered plant and animal species that inhabit the area. For example, pronghorn and tule elk roam the Monument. These two magnificent animals, which were almost totally eliminated in the region by uncontrolled hunting during the last century, have begun to reestablish themselves in the Monument following reintroduction programs. The Monument contains Soda Lake, one of America's largest undisturbed alkali wetlands,, which provides an important habitat for migratory birds, including sandhill cranes and long-billed curlews. Also included in the Monument are the Temblor and Caliente mountain ranges, which include lands of wilderness quality. The Monument provides a multitude of public benefits including recreational opportunities, wildlife habitat, extraordinary wildflower viewing, bird watching, and chances to experience solitude and wilderness and the preservation of our American heritage.

The Bureau of Land Management (BLM) manages the Monument as part of the National Landscape Conservation System ("Conservation System"). The Conservation System comprises more than 26 million acres of BLM lands "designated for their outstanding scientific values, including cultural, archaeological, biological, social, paleontological, and geologic resources."<sup>1</sup> The mission of the Conservation System is "to conserve, protect, and restore nationally significant landscapes recognized for their outstanding cultural, ecological, and scientific values" for the benefit of current and future generations.<sup>2</sup>

In order to protect this unique natural and cultural landscape, the Presidential Proclamation creating the Carrizo Plain National Monument established specific management

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<sup>1</sup> U.S. Department of the Interior, Bureau of Land Management, Instruction Memorandum No. 2007-116 – Implementation of the National Landscape Conservation System Science Strategy  
[http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2007/im\\_2007-116\\_.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2007/im_2007-116_.html)

<sup>2</sup> U.S. Department of the Interior, Bureau of Land Management, National Landscape Conservation System  
[http://www.blm.gov/wo/st/en/prog/blm\\_special\\_areas/NLCS.1.html](http://www.blm.gov/wo/st/en/prog/blm_special_areas/NLCS.1.html)

requirements, which include prohibiting all off-road use of motorized and mechanized vehicles (except for emergency or administrative purposes) and withdrawing the Monument lands from mineral leasing and mining (subject to valid existing rights).

Traditionally, the economy of this part of California has been perceived as one based on the extraction of the region's abundant natural resources – mining, logging, oil and gas drilling, farming, and ranching. However, over the past 30 years the region's economy has become much more diversified with recreation, tourism, the professional and service sector, retirees and entrepreneurs making important contributions to the region's economic well-being. As we will discuss, all of these important economic sectors directly or indirectly benefit from protected public land in this region, specifically the Carrizo Plain National Monument.

As the population of this region continues to grow, the presence of undeveloped lands like the Carrizo Plain National Monument will become more and more important for the local economies in meeting growing needs for clean air, wildlife habitat and recreation opportunities. Resource managers, economic planners and community leaders in the area can take advantage of this potential and capitalize on the role that the Monument plays in the area's long-term economic and social health and well-being.

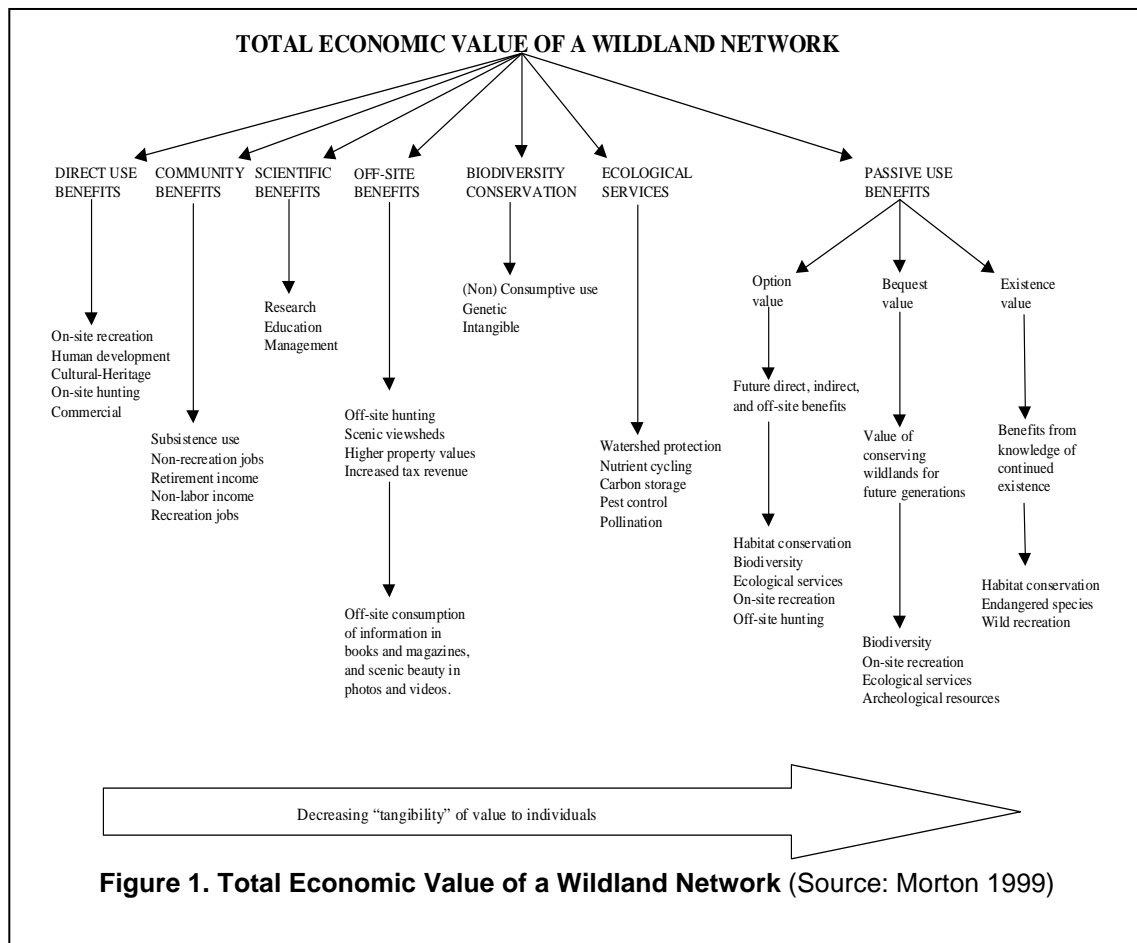
Through the analysis of key demographic and economic indicators, this report shows how the protection of the Carrizo Plain National Monument will advance the diversification and health of the region's economy. First, we define the economic region that includes the Monument. We then analyze the changing demographics of the region. In addition, we analyze key economic trends and indicators for the area surrounding the Monument. Finally, we explicitly define the role that the Monument can play in the economic prosperity of the region. The president recognized the Carrizo Plain as a national treasure. This report shows how it can also be a local asset.

## **PROTECTED PUBLIC LANDS AND ECONOMIC PROSPERITY**

Public lands have long been a source of economic benefit to surrounding communities, and the Carrizo Plain National Monument is no exception. In the past, these benefits were largely derived from the salable commodities that can be extracted from the land: oil, gas, minerals and livestock feed. However, protecting public wildlands from such development also provides immense public benefits – benefits that more difficult to quantify yet are invaluable. They

include opportunities for recreation and research, wildlife habitat, scenic vistas, clean air, clean water, and the preservation of a vital part of our American heritage (Morton 1999). Figure 1 shows many of the benefits of wildlands which can enhance the ultimate benefit to local economies.

Protected wild places also provide indirect support for local and regional economies, a fact that is increasingly being recognized by communities throughout the West. These lands provide a scenic backdrop, recreation opportunities and a desirable rural lifestyle, and many other tangible and intangible amenities that attract new residents, business and income to the rural West.



Several studies of specific communities have also found that protected public lands contribute to economic prosperity. In a report examining the economic health of Doña Ana County, New Mexico, the Sonoran Institute (2006) found that the county has many of the attributes found to correlate with economic prosperity. The area possesses an abundance of

natural amenities, beautiful scenery, and many of the other natural amenities and attributes correlated with economic growth in the rural West. Barrens et al. (2006) also focused their research in New Mexico, estimating the total economic benefits of protecting the state's inventoried roadless areas. They estimate that these areas provide between 563 and 880 jobs, generate from 13.7 to 21.5 million dollars of personal income and, most importantly, induce economic growth rates that are faster for counties containing roadless areas than for those without.

A vast and growing body of research indicates that the environmental amenities provided by public lands are an important economic driver in the rural West (for example: Rudzitis and Johansen 1989; Johnson and Rasker 1993, 1995; Rasker 1994; Power 1995, 1996; Duffy-Deno 1998; Rudzitis 1999; Rasker et al. 2004; Holmes and Hecox 2004). In a letter to the President and the Governors of all the Western states, 100 economists from universities and other organizations throughout the United States pointed out that, "The West's natural environment is, arguably, its greatest long-run economic strength" (Whitelaw et al. 2003).

A recent report examining every county in the eleven western states, including California, (Rasker et al. 2004) found that the presence of protected public lands, transportation and communication infrastructure, along with access to larger markets in metropolitan centers, and recreation and scenic amenities are highly correlated with the strongest economic growth in the rural West. Other important attributes associated with economic growth include an educated workforce and a diverse mix of industries.

Other research also supports the assertion that protected public lands contribute to rural economic health (Rudzitis and Johnson 2000, Rudzitis and Johansen 1989). Local communities with nearby protected wildlands reap measurable benefits in terms of employment and personal income. "Telework" using electronic communication has made it possible for more and more people in the West, and all over the country, to choose where they live and work. Many businesses are able to conduct national or international commerce from any location they choose. Other entrepreneurs simply choose to live in a particular place and build businesses in response to local needs. Retirees are also not tied to a specific location by employment. All of these people often seek an attractive place to live.

Research has also shown that wilderness is beneficial for local economies. For example, residents of counties with wilderness cite the presence of that wilderness as an important reason why they moved to the county, and long-term residents cite it as a reason they stay (Rudzitis and Johansen 1989). Survey results also indicate that many firms decide to locate or stay in the West because of scenic amenities and wildlife-based recreation (Johnson and Rasker 1995). As noted by Freudenburg and Gramling (1994):

"...it needs to be recognized as a serious empirical possibility that the future economic hope for resource-dependent communities of...the United States could have less to do with the consumption of natural resources than with their preservation."

This is reiterated by Deller et al. (2001):

"Rural areas endowed with key natural resource amenities can manage those resources to capture growth more effectively. This may entail expansion beyond policies that have historically been focused on extraction of the resource base."

As development increases near the Carrizo Plain National Monument, this landscape will become even more integral to the community (as its backdrop or setting), contributing to and even creating the amenities on which the communities' economies depend.

### **The Carrizo Plain National Monument: A Case Study**

This report focuses on the diverse benefits and their current and potential impact on the communities surrounding the Carrizo Plain National Monument, demonstrating how benefits from wildlands, including those specifically related to the Monument, are and will continue be an important factor in the economic success of this region. The findings of the report also highlight the importance of supporting protective management of the Carrizo Plain National Monument for the future economic health of local and regional communities.

We present the results of a case study of the communities surrounding the Carrizo Plain National Monument. The report examines key demographic and economic indicators and trends for the region. The rest of report includes the following sections: a definition of the economic region that includes the monument; analysis of the changing demographics of the region; analysis of key economic trends and indicators for the area surrounding the Monument; the

economic benefits of active recreation and natural amenities; and a discussion of the role that the Carrizo Plain National Monument can play in the economic prosperity of the region.

### **THE CARRIZO PLAIN NATIONAL MONUMENT REGION**

The Carrizo Plain National Monument lies almost entirely within San Luis Obispo County, along the eastern edge. It is bordered by Kern County on the east and Santa Barbara County to the south and west. The geography, demographics and economies of the three Monument Counties are very different from each other.

**Kern County** is the largest of the three counties and the most diverse in terms of the ecosystems encompassed within its borders. Kern County contains high mountains, rivers and portions of both the Mojave Desert and the Central Valley – famed for its productive agriculture. While Kern County includes only a small portion of the Monument, it also has several other natural attractions including the Tule Elk Reserve State Park and the Kern River State Recreation Area along with others farther from the Monument, all of which may draw tourist to the area to see both these attractions and the Carrizo Plain National Monument. This county is also easily accessible by Interstate from both San Francisco and Los Angeles.

Kern County also has a long history of resource extraction beginning with gold mining in the middle of the 19<sup>th</sup> Century and later becoming one of the major oil producing areas in the U.S. This reliance on resource extraction sets Kern County apart from the other Monument counties, and we will discuss the county's economy in more detail in the report.

Within Kern County, the city of Taft lies just east of the Monument and is the nearest city to the Monument with a full range of services for Monument visitors - for this reason it merits some extra focus. The city recognizes that its proximity to the Monument (it is the nearest city) and the area's both stunning public lands as well as it's location between two of the state's major urban areas (San Francisco and Los Angeles) places it in an enviable position to direct its future growth and prosperity by taking advantage of its location. Taft has a long history with the oil industry and while working to craft a new, more diversified economy for itself by taking advantage of the Monument and other local natural amenities, the city also continues to embrace the oil industry. The city is also taking a proactive approach to maintaining its small town

character and improving its quality of life through its planning efforts and by recognizing the potential benefits of the Monument.<sup>3</sup>

**San Luis Obispo County** is the third largest producer of wine grapes in the state (only Napa and Sonoma Counties produce more) and wine grapes are the largest agricultural output in the county. Tourism has long been an important part of San Luis Obispo's economy, making the Monument yet another asset in an already diverse county. About two hours from the Monument is San Luis Obispo County's largest city – San Luis Obispo – home to the California Polytechnic State University (“Cal Poly”). The campus sits in the foothills on over 9,000 acres and the student body makes up about a third of the city's population. Originally founded as a mission in 1772, it was the fifth in a series of twenty-one missions along the coast of California. The county is also home to several smaller towns including Morro Bay, Pismo Beach, Arroyo Grande on the coast and Paso Robles and Atascadero inland, nearer to the Monument.

**Santa Barbara County** also has important viticulture and agricultural sectors along with significant oil production. The county hosts another of the state's major universities – the University of California, Santa Barbara. Vandenberg Air Force Base is also located in Santa Barbara County. The city of Santa Barbara, like many of the cities along the central coast, dates back to the 16<sup>th</sup> Century and was originally a mission. The city's long and diverse history makes it culturally rich as well economically diverse. Tourism currently plays a large role in the county's economy; and the Carrizo Plain National Monument will likely be of benefit to the county by adding to the already diverse and plentiful attractions.

In summary, Kern County, and especially the Taft area are perhaps in the best position to see positive change due to the presence and management of the Carrizo Plain National Monument since this area has been less focused on natural amenities and tourism in the past. Increased visitation is more likely to bring in additional dollars to this area, whereas in San Luis Obispo and Santa Barbara Counties, existing visitors may simply add the Monument to their itineraries. As the Monument becomes more of a destination it may serve as one of the amenities that can attract investment capital (in the form of increased wealth) and a skilled, innovative workforce to the area, thus stimulating economic growth.

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<sup>3</sup> City of Taft Official Website - <http://www.cityoftaft.org/>

It should be noted however, that Kern County (as well as the other two Monument Counties and the entire country for that matter) owes its economic growth to a sustained upward trend in the professional and service sector – which in turn relies on a skilled workforce often attracted by an area’s amenities.

#### **ECONOMIC STUDY REGION FOR THE CARRIZO PLAIN NATIONAL MONUMENT CASE STUDY**

In order to facilitate an assessment of the economic and demographic trends in this part of California, the report presents data for each of the three counties described above. Because these counties are large and diverse, the report will also examine six Census County Divisions (CCDs) within the three counties. CCDs are county subdivisions that are delineated by the U.S. Census Bureau, in cooperation with state and local officials for purposes of presenting statistical data. Generally a CCD covers a population of approximately 5500 people and is similar to a minor civil division (or subdivision) used for more densely populated counties. The CCDs are discussed below and are defined in this report as the **Carrizo Plain National Monument Economic Region** (Figure 2).

Within Kern County, the largest of the three Monument Counties analyzed, we looked at the Westside CCD, which lies along the eastern edge of the Monument. This CCD includes the cities of Taft, South Taft, Taft Heights, Fellows, Ford City and Maricopa. As the six cities closest to the Monument, this area is most likely to be affected by its management, so key demographic and economic data for these cities have been separated for more focused analysis as the “**Taft Area.**”<sup>4</sup> In San Luis Obispo County, we focused our analysis on three CCDs. The Atascadero and Arroyo Grande CCDs contain several small communities, such as California Valley, along the northern edge of the Monument. The third CCD in SLO County, the San Luis Obispo CCD, is not directly adjacent to the Monument, but includes one of the main commercial airports for the region. In Santa Barbara County, the relevant CCDs are the Cuyama CCD which contains several small communities and the Santa Maria Valley CCD which is home to several wineries and may be in a position to take advantage of the synergistic relationship between these attractions and the Monument.

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<sup>4</sup> It should be noted that the Taft Area is a subset of the Westside CCD, rather than an additional area.



**Figure 2. Carrizo Plain National Monument Economic Region**

For the remainder of this report, we will refer to these six Census County Divisions described above as the “Carrizo Plain National Monument Economic Region” (or the “Monument Economic Region”). Wherever possible, this report will use data for each of these areas, as well as data for the Taft Area (defined above). Unfortunately, certain data are only available at the county level; so in some instances, we present data for the three counties surrounding the Monument. We refer to these as the “Carrizo Plain National Monument Counties” (or the “Monument Counties”).

## **Trends and Indicators for the Carrizo Plain National Monument Counties**

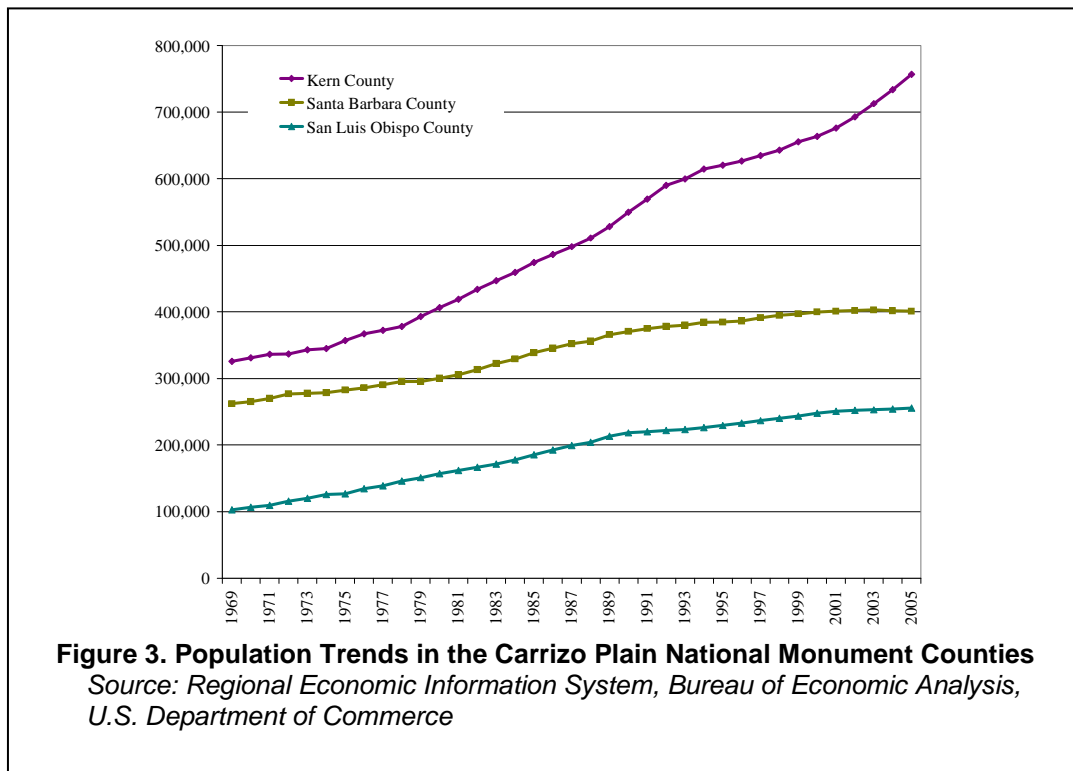
### **POPULATION TRENDS IN THE CARRIZO PLAIN NATIONAL MONUMENT COUNTIES**

Between 1990 and 2000, the western United States grew at a rate faster than any other region (U.S. Census Bureau 2001). Furthermore, and counter to the norm, population growth

preceded employment growth in the rural West between 1970 and 1995 (Vias 1999). The region’s amenities continue to fuel this trend. Counties with high levels of natural amenities (such as varied topography, access to water bodies, and a pleasant climate) are more likely to experience both higher population and economic growth than those counties with fewer such amenities (McGranahan 1999).

Between 1969 and 2005, California’s population grew by 83%, nearly twice the rate of the rest of the country. Over the same time period, Kern and San Luis Obispo counties both grew faster than the state as a whole, increasing by 133% and 149% respectively (Figure 3).

As the population of the Carrizo Plain National Monument Economic Region continues to grow, open space in the area will become scarcer and development pressures on open lands, such as the Carrizo Plain National Monument, will increase. This, in turn will continue to increase the value of the Monument in the context of each of the factors discussed below.



Research by Rasker et al. (2004) has shown that the presence of protected public land, such as National Parks, National Monuments and Wilderness Areas, in rural counties in the West is positively correlated with economic growth. Those counties that also possess certain other characteristics show even more pronounced benefits from nearby protected public lands. These

attributes include an educated workforce, transportation infrastructure (highways and airports), a diverse professional and service sector that includes high wage occupations, a diverse economy in general and the in-migration of newcomers. While all people undoubtedly appreciate the amenities from protected public lands, today’s high-tech workers and entrepreneurs are both more flexible in their choice of location and more financially capable of relocating to the communities with abundant natural amenities that they find appealing. As these individuals migrate to an area, often bringing businesses, they enhance the sustainable economic opportunities available for entire communities.

**INCOME AND EMPLOYMENT TRENDS**

**General Income & Employment Trends**

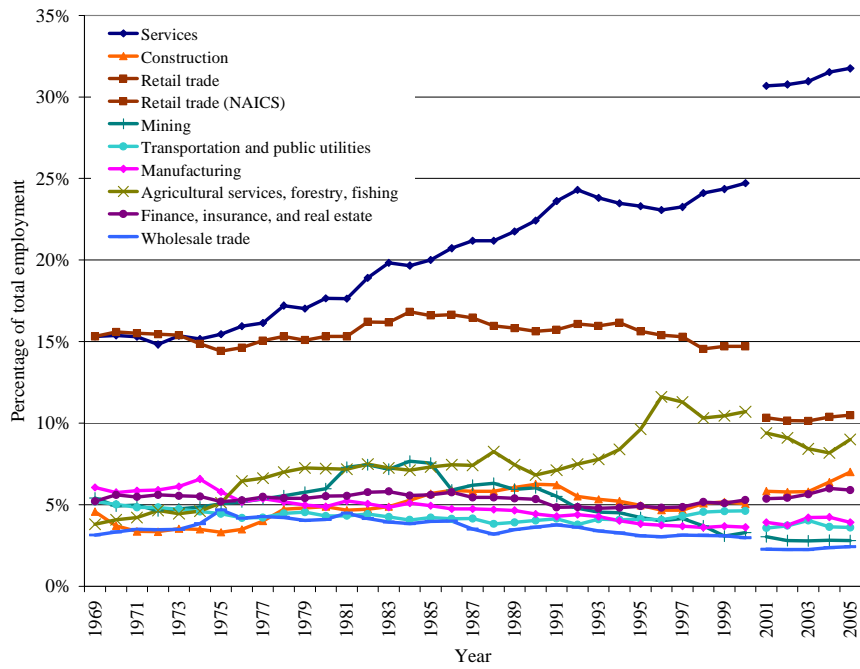
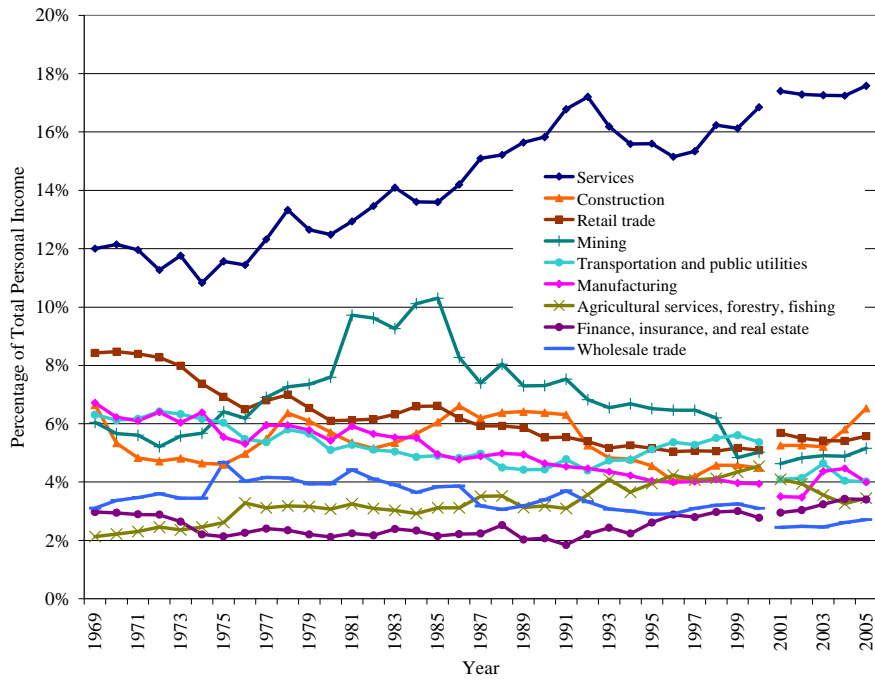
In the last 30 years, California along with the rest of the West has evolved from a region with a large focus on agricultural and extractive industries into a region with a more diversified economy (Bennett and McBeth 1998, Johnson 2001). These changes in employment and income help in understanding the overall direction in which an area’s economy is moving. Trend analysis shows long-term patterns in income and employment that may be masked when looking at only a point in time. This report examines both income and employment, as these will give a more complete picture of the region’s economic health and diversity. Some industries have a tendency to fluctuate greatly in income while employment remains stable. Other industries’ income may remain more stable while the employment fluctuates. In still other industries, employment and income may move together closely (Table 1). Figures 4-6 show the trends in income and employment by industry for the three Carrizo Plain National Monument Counties.<sup>5</sup>

<b>Table 1. Carrizo Plain National Monument Counties - Percentage of Total Personal Income and Employment by Industry (2005)</b>				
		Kern County	San Luis Obispo County	Santa Barbara County
Services	Income	17.58%	19.65%	24.25%
	Employment	31.75%	40.42%	42.17%

<sup>5</sup> The figures in this report combine data classified under both the Standard Industry Classification system (SIC) for 1969-2000 and the North American Industry Classification System (NAICS) for 2001 forward. We have indicated where the classification changes with a break in the graph. See the Appendix for a more detailed explanation of these two systems and a comprehensive list of the specific industries and sectors used in these figures.

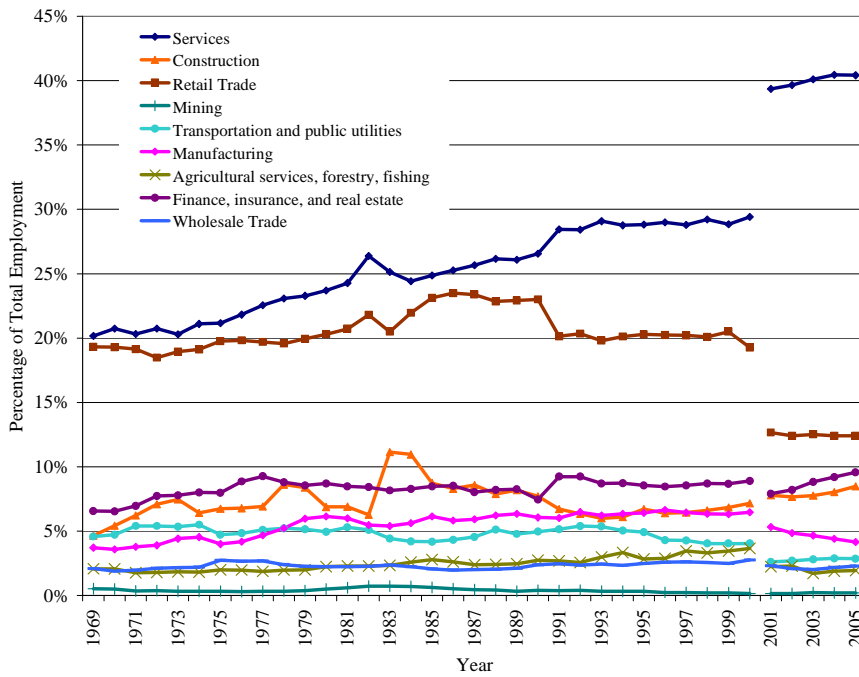
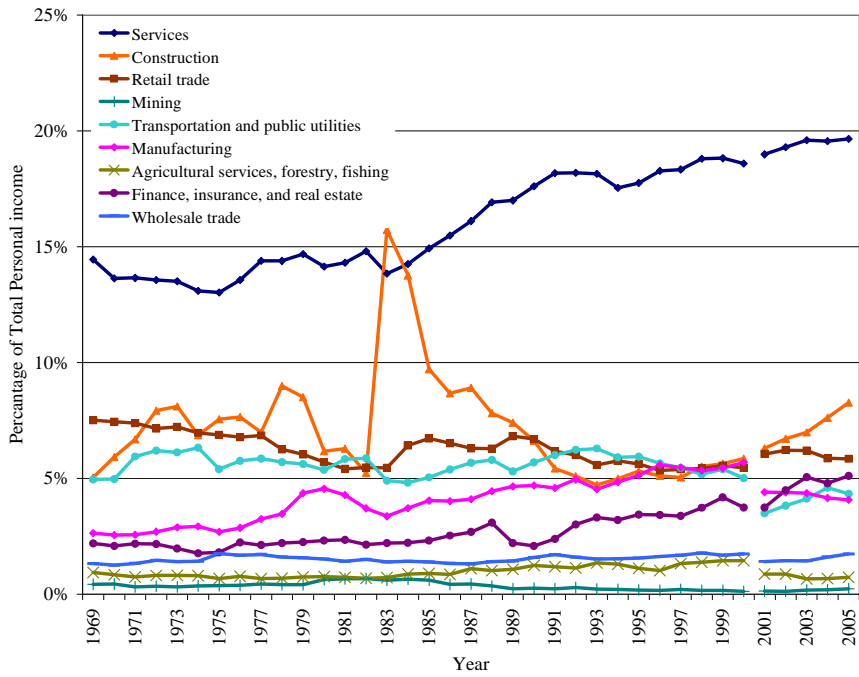
<b>Table 1. Carrizo Plain National Monument Counties - Percentage of Total Personal Income and Employment by Industry (2005)</b>				
		Kern County	San Luis Obispo County	Santa Barbara County
Construction	Income	6.53%	8.27%	5.04%
	Employment	7.01%	8.47%	5.75%
Retail Trade	Income	5.57%	5.85%	5.02%
	Employment	10.49%	12.39%	10.00%
Mining	Income	5.15%	0.24%	0.73%
	Employment	2.80%	0.20%	0.48%
Utilities, transportation, warehousing	Income	4.01%	4.33%	1.18%
	Employment	3.59%	2.85%	1.61%
Manufacturing	Income	4.00%	4.08%	7.03%
	Employment	3.91%	4.15%	5.82%
Forestry, fishing, related activities	Income	3.45%	0.74%	1.29%
	Employment	9.00%	1.93%	3.14%
Finance, insurance, real estate	Income	3.39%	5.11%	6.08%
	Employment	5.89%	9.57%	8.41%
Wholesale trade	Income	2.71%	1.74%	2.03%
	Employment	2.42%	2.28%	2.29%
<i>Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce</i>				

Kern County’s economy has been more reliant on mining and agriculture than the other two counties in our study area, but the service sector still produces the majority of income and employment (Figure 4). The large fluctuation in income from the mining industry indicates the potential for “boom-and-bust” in this sector of the economy. The service sector’s current and historic role in producing the largest portion of the county’s income and employment, along with its upward trend, demonstrates that this sector will likely be important to the area in the future. Economic planning must strive to ensure that the professional and service sector remains vital and diverse.



**Figure 4 Trends in Personal Income and Employment by Industry  
Kern County, California**

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

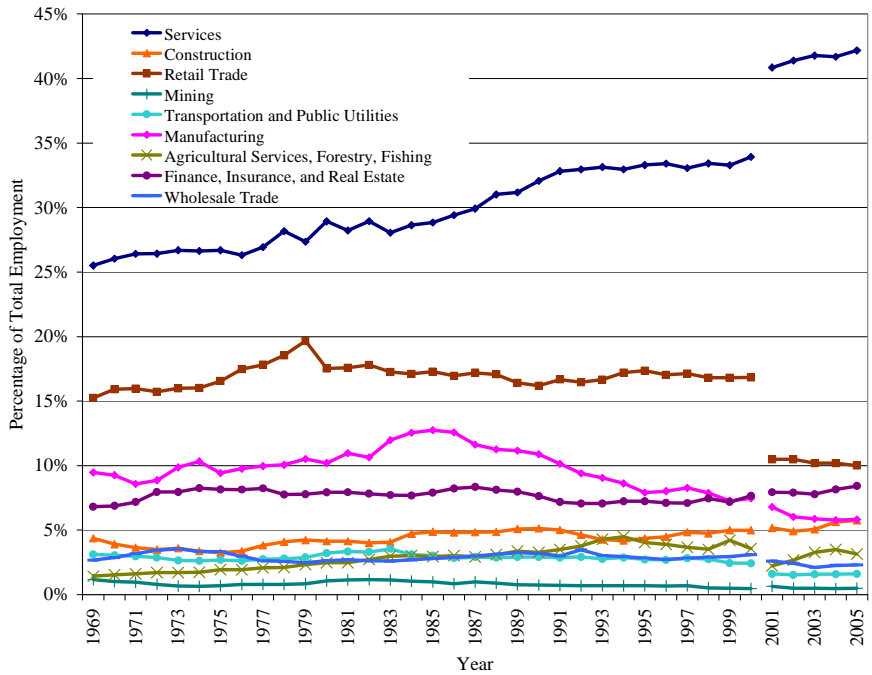
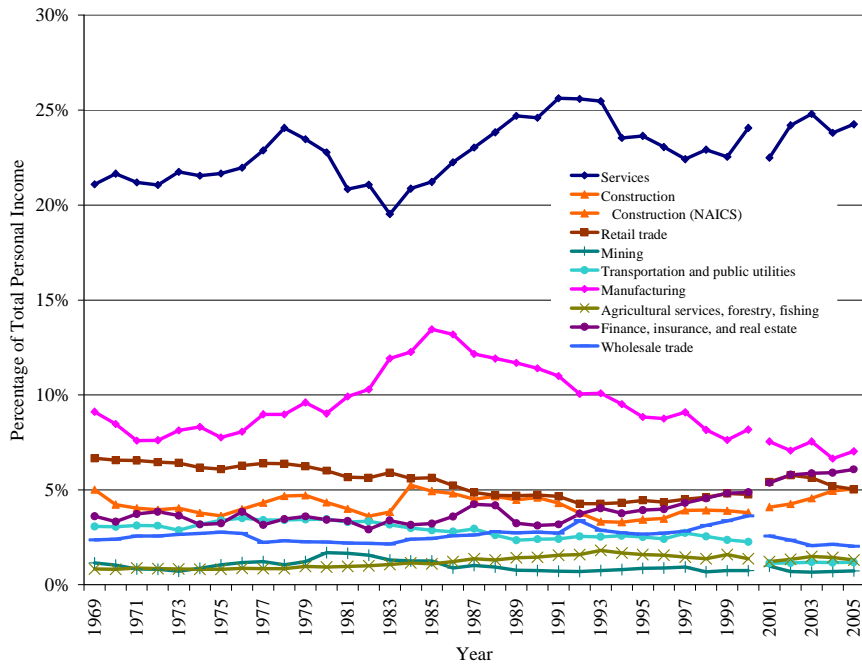


**Figure 5 – Trends in Personal Income and Employment by Industry  
San Luis Obispo County, California**

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

The service and retail trade sectors are the two largest contributors to employment in San Luis Obispo County (Figure 5). At the same time the construction sector, along with services are the largest sources of income. Similar to mining income in Kern County, construction income in San Luis Obispo shows a great deal of variability over the time period. Both income and employment in the service sector have shown a fairly steady upward trend.

The service sector in Santa Barbara County accounts for nearly a quarter of income and almost 35% of employment (Figure 6). Retail trade and construction also contribute substantially to the county's economy. Unlike Kern or San Luis Obispo Counties, Santa Barbara County also receives a notable proportion of its income and employment from the manufacturing sector.



**Figure 6 – Trends in Personal Income and Employment by Industry  
Santa Barbara County, California**

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

## **Professional & Service Industries - Relationship with Mining and Agriculture**

While the preceding figures give a general overview of the makeup of the economies of the three Monument Counties, two sectors merit some additional examination. The professional and service sector, agriculture and mining sectors all often appear important to local economies. Even when the mining sector has a larger role in the local economy, the professional and service sector remains a key to a healthy economy overall.

Recent research shows that most western counties are not "resource dependent," and have instead developed diversified economies based on recreation, tourism, knowledge-based industries and the service sector. Rasker et al. (2004) examined the impact of public lands on economic well-being in 11 western states and found that only 3 percent of western counties could be classified as resource-extraction dependent.<sup>6</sup> At the same time, Shumway and Otterstrom (2001) found that there is also a significant trend in the rural West toward economies that are dominated by service sector industries.

The communities on the eastern side of the Monument are more dependent on mining and agriculture than those on the west side (Table 2). This is especially evident in the Cuyama CCD where these two sectors make up 37% of total employment - a larger proportion of the total than the professional and service sector. Farming and ranching together with mining account for 21% of total employment in the Taft area, but still far less than the 46% area residents who work in the professional and service sector. The three CCDs in San Luis Obispo County all have larger proportions of employment in the professional and service sector, while agriculture and mining both play much smaller roles in these CCDs. For each of the local economies and for the regional economy, the professional and service industries are a vital part of their health. As discussed above, the proximity of protected wildlands in the Carrizo Plain National Monument is an important factor in keeping the professional and service industries sector of the economy strong and growing.

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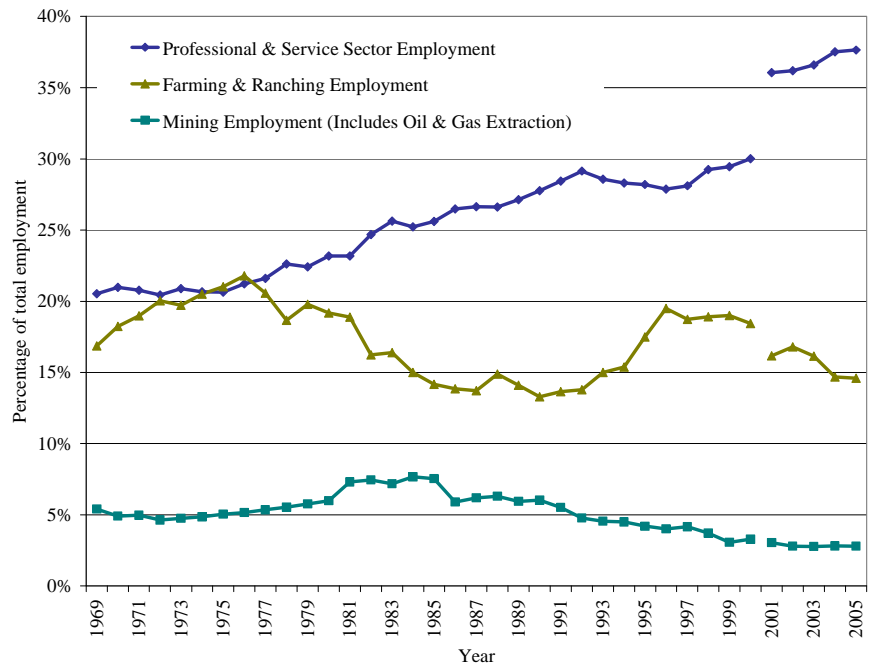
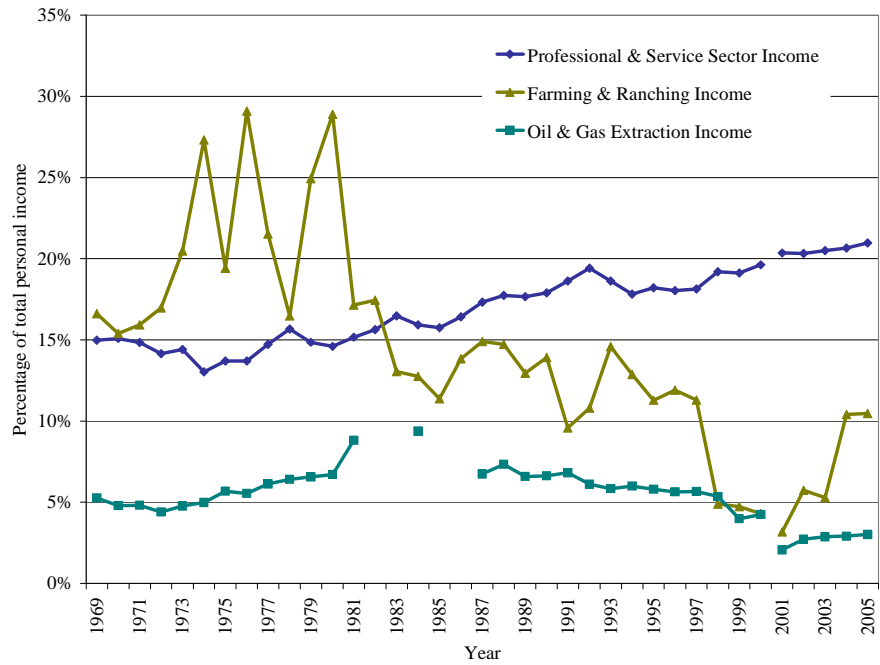
<sup>6</sup> When an area is dependent upon only one or a few industries for most of its employment and income, there are often negative consequences, mostly stemming from fluctuations in the dominant industries. Research has indicated that an emphasis on resource extraction results in inherently economically unstable communities (Smith 1986, Guilliford 1989, Fortmann et al. 1989, Goldsmith 1992, Freudenburg 1992, Humphrey et al. 1993, Freudenburg and Gramling 1994, Limerick et al. 2002, Hoffman and Fortmann 1996). Resource dependent communities have been found to have higher poverty rates than communities with more diverse economies, and this higher poverty rate has been observed during both "boom" times and industry downturns. This instability in income and employment is also largely a result of forces completely outside local control.

<b>Table 2. Employment in the Carrizo Plain National Monument Economic Region</b>			
	Percentage of Total Employment		
	Professional & Service Sector	Mining (includes oil & gas extraction)	Farming & Ranching
<b>Kern County</b>			
Westside CCD	48%	13%	4%
Taft area	46%	17%	4%
<b>San Luis Obispo County</b>			
San Luis Obispo CCD	70%	0.09%	1.3%
Atascadero CCD	60%	0.24%	1.7%
Arroyo Grande CCD	59%	0.39%	4.1%
<b>Santa Barbara County</b>			
Cuyama CCD	35%	5%	32%
Santa Maria Valley CCD	47%	1%	16%
California	59%	0.15%	2%
United States	57%	0,38%	1.5%
<i>Source: U.S. Department of Commerce, Census Bureau Data, compiled by the Economic Profile System for Communities (EPSC), available at: <a href="http://www.sonoran.org/eps/">http://www.sonoran.org/eps/</a></i>			

Figures 7 - 9 show the income and employment trends for the professional and service sector, the mining sector (oil and gas extraction), and farming and ranching for the three Monument Counties.

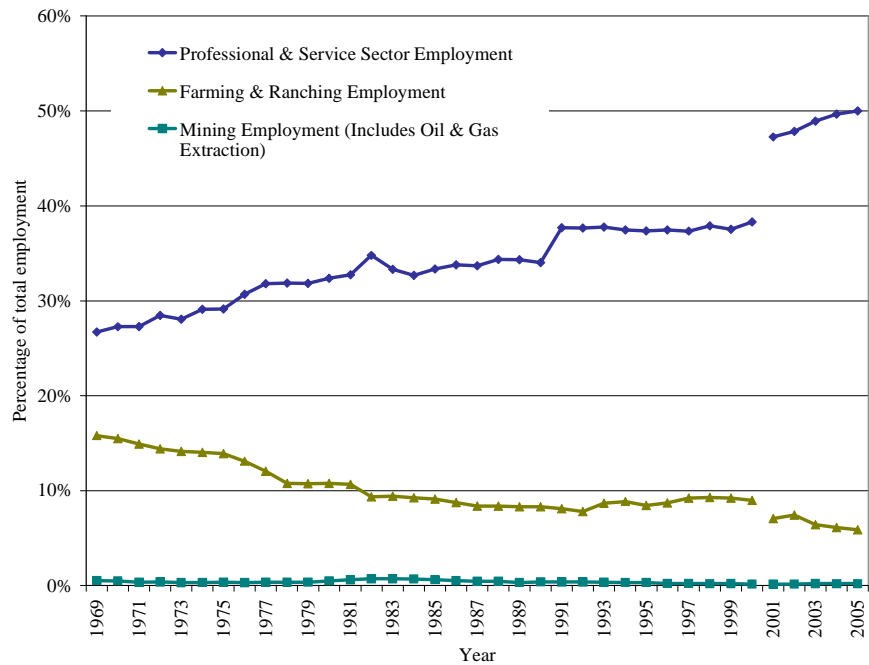
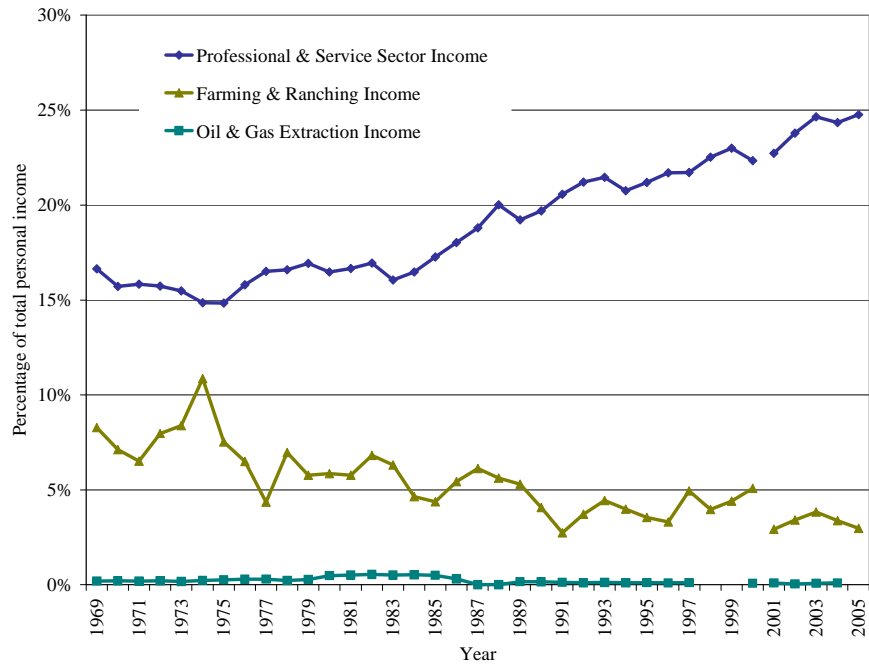
While farming and ranching and the oil and gas industries make up a large part of Kern County's economy, the income stream appears to be quite variable (Figure 7). Income from the professional and service sector has surpassed that of both these industries in recent years and throughout most of the past three decades the professional and service sector has contributed more jobs in Kern County than either farming and ranching or mining (which includes oil and gas extraction).<sup>7</sup>

<sup>7</sup> Data from the Bureau of Economic Analysis is more detailed for income than it is for employment, therefore we are able to show the oil and gas industry separately in Figures 10, 12, and 14. This sector makes up a very large portion of the income from the mining sector in each of the Monument Counties, and therefore we feel that it is likely also the largest contributor to total mining employment.



**Figure 7 – Trends in Personal Income and Employment for the Professional & Service Sector, Farming & Ranching and Oil & Gas Extraction  
Kern County, California**

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



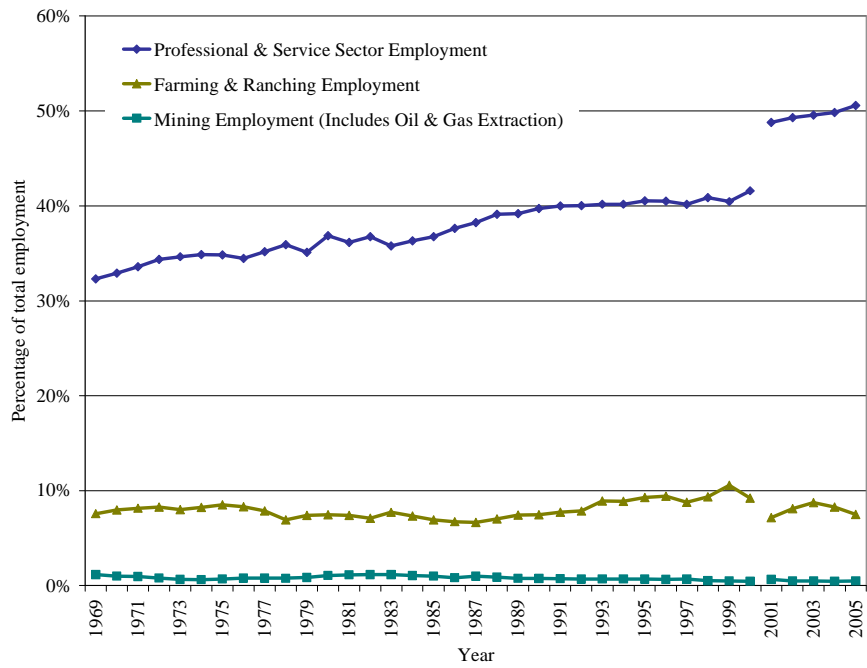
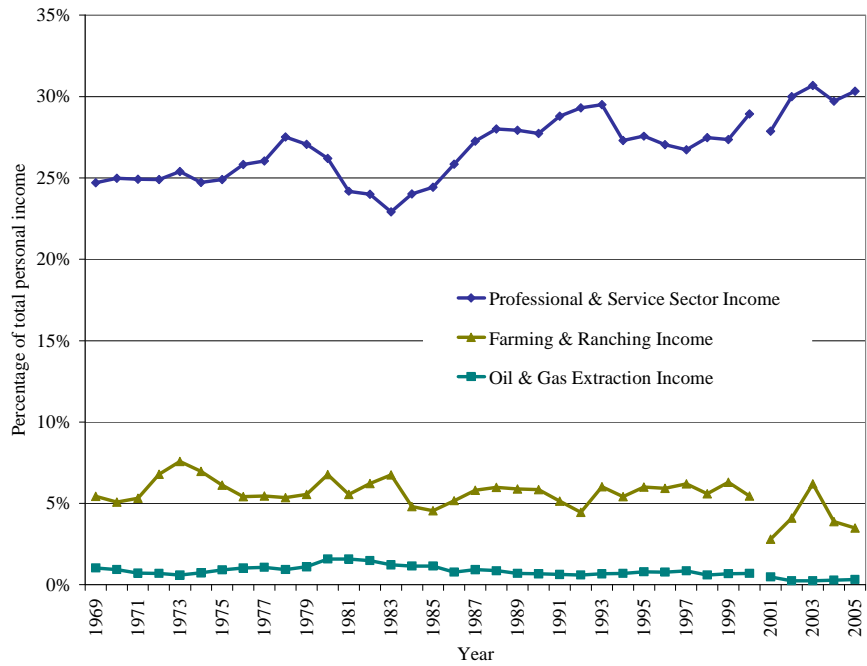
**Figure 8 – Trends in Personal Income and Employment for the Professional & Service Sector, Farming & Ranching and Oil & Gas Extraction San Luis Obispo County, California**

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

Oil and gas extraction represents a much smaller proportion of the income and employment in San Luis Obispo County (Figure 8). While farming and ranching accounts for a slightly larger proportion of income and employment, this sector shows a general decline in relative importance. On the other hand, professional and service sector income and employment in the county has generally trended upward for over two decades.

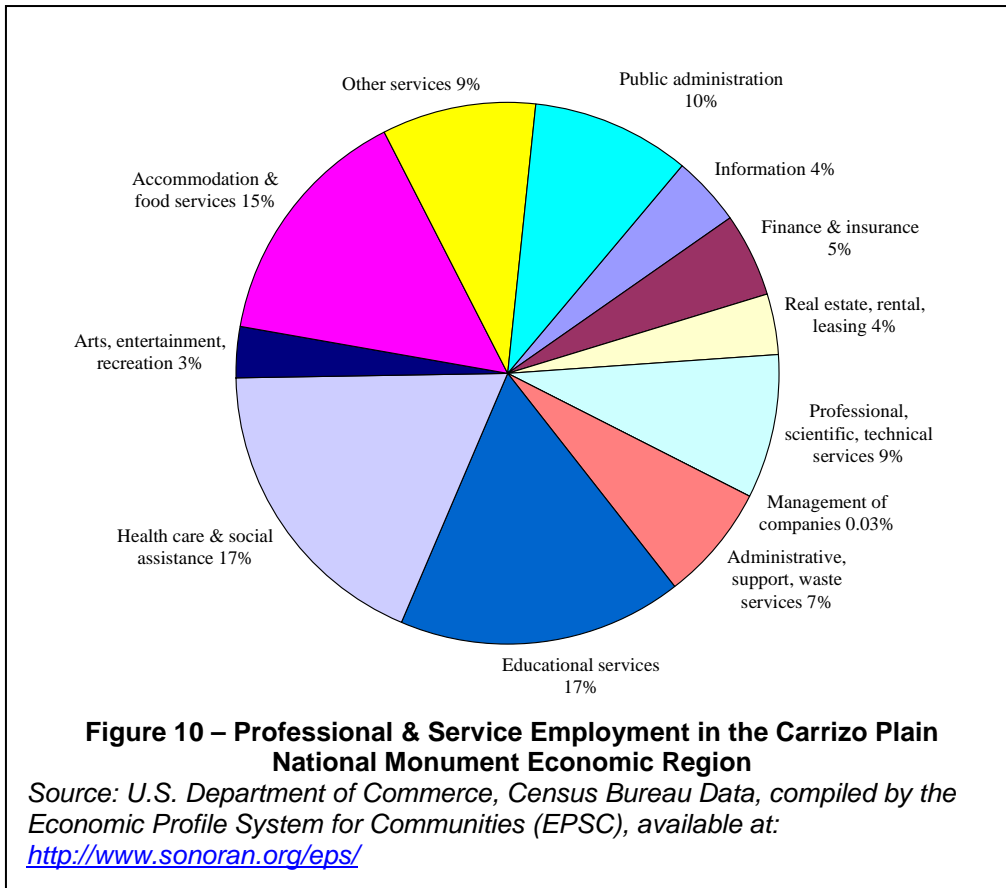
Santa Barbara County also relies on the professional and service sector for a large proportion of both income and employment, but there is a less pronounced upward trend in the income in this sector than in the other Monument Counties (Figure 9). Similar to San Luis Obispo County, oil and gas extraction is only a small portion of total income, and the mining sector (of which oil and gas extraction is a large part) is also a small contributor to employment in the county.

Since the professional and service sector makes up a large portion of the total income and employment in the Economic Region, it is important to acknowledge that this sector includes a diverse mixture of occupations, encompassing both high- and low-paying jobs. This sector includes doctors and nurses, business managers and engineers, lawyers and architects – all well-represented occupations in the Carrizo Plain National Monument Economic Region (Figure 10).



**Figure 9 – Trends in Personal Income and Employment for the Professional & Service Sector, Farming & Ranching and Oil & Gas Extraction Santa Barbara County, California**

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



The professional and service sector in the Carrizo Plain National Monument Economic Region is diverse, including representation across the full spectrum of occupations. Therefore, this large sector provides income and employment opportunities in the Monument Counties for residents possessing a wide range of skill levels. The Monument can also attract both workers and opportunities in high-paying service sector jobs. Speaking about the National Monument and other nearby protected public lands David Garth, president/CEO of the San Luis Obispo Chamber of Commerce, notes that "...businesses are attracted to this area because of the highly desirable labor pool that chooses to settle in this beautiful natural setting and experience the county's great quality of life."<sup>8</sup>

### REGIONAL ASSET INDICATORS

The Center for the Study of Rural America, at the Federal Reserve Bank of Kansas City (The Rural Center) has developed a set of Regional Asset Indicators that are often linked to the potential for economic growth in rural counties (Weiler 2004). The Rural Center describes the

<sup>8</sup> David Garth. April 10, 2008. Personal Communication.

regional asset indicator as providing "...new, forward-looking metrics that regions can use to better understand their economic assets and to help inform private, public, and nonprofit regional development strategies."<sup>9</sup>

These Regional Asset Indicators often corroborate the findings of Rasker et al (2004). They also serve to extend and enrich the picture of the region's economic and demographic characteristics. We use these indicators, along with the factors identified by Rasker et al. that correlate with economic success, to assess the potential for the communities in the Carrizo Plain National Monument Economic Region to benefit from and take advantage of the presence of the Monument and its management.

### **Human and Natural Amenities**

An area's amenities often act as a key driver of economic prosperity. The Rural Center has developed an index to measure the level of human amenities for each county, which includes a measure of natural amenities (developed by the U.S. Department of Agriculture), access to healthcare, innovation (which is also measured separately as an additional Regional Asset Indicator below), recreation areas and restaurants. These are then standardized into one index for each county (Center for the Study of Rural America 2006a).

As the Rural Center points out, the human amenity index is highest in coastal and mountain regions. This helps to explain the high index scores for all the Monument Counties as well as California as a whole when compared to the entire country. The scores may well reflect the presence of the Monument as well as the many other scenic and recreation opportunities available in the Carrizo Plain National Monument Economic Region.

One of the facets that the Rural Center includes in its Human Amenities Index is the Natural Amenities score calculated by the U.S. Department of Agriculture. This index is based on climate factors (warm winters and mild summers), proximity to water bodies and varied topography. All three Monument Counties have Natural Amenity Scores that are much higher than the U.S. average, and Santa Barbara and San Luis Obispo Counties have scores higher than California's average. The region clearly enjoys an advantage in terms of natural amenities which enhances its score for human amenities. (Table 3)

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<sup>9</sup> The Center For the Study of Rural America, Federal Reserve Bank of Kansas City, [http://www.kc.frb.org/RuralCenter/Indicators/Indicators\\_main.htm](http://www.kc.frb.org/RuralCenter/Indicators/Indicators_main.htm)

	Human Amenity Index <sup>a</sup>	Natural Amenity Scale
Kern County	34	4.84
San Luis Obispo County	40	7.87
Santa Barbara County	47	10.97
Average of all California Counties	41	6.73
Average of All U.S. Counties	29	0.06

<sup>a</sup> Calculated by the Center for the Study of Rural America, Summer 2006  
<sup>b</sup> Source: U.S. Department of Agriculture, Economic Research Service, Natural Amenities Typology

Communities in the Economic Region can enhance the human amenity index by ensuring that local recreational and scenic amenities, like the Carrizo Plain National Monument, remain well-protected and that other factors in the index are also supported. Many of the regional asset indicators that are discussed below reflect the quality of a region’s workforce. Because areas which have abundant amenities are more able to attract and retain a high quality workforce, the Human Amenity Index is very important for the region as it may well be the key to enhancing and maintaining the other important workforce and demographic indicators discussed below. Human amenities have been found to be positively correlated with both income and employment growth (Center for the Study of Rural America 2006a). In addition to attracting a quality workforce, amenities also attract retirees and others with non-traditional sources of income (Nelson 1999). These new residents in turn spur economic development (Deller 1995). Residents who rely on non-labor income become both a pool of customers and clients for new business and a potential source of investment capital.

## **Workforce Indicators**

### *Creative Workforce*

A creative work force increases a region’s human capital and its level of innovation and entrepreneurship. The Center for the Study of Rural America’s creativity index draws upon the work of Richard Florida (2002)<sup>10</sup> (who wrote about the “creative class”) along with the work of

<sup>10</sup> Florida, Richard. 2002. *The Rise of the Creative Class And How It’s Transforming Work, Leisure, Community and Everyday Life*. Basic Books. New York. Cited by the Center for the Study of Rural America.

other researchers. The Center's index measures the level of specialized, highly creative occupations that are unique to an area, making a distinction between these unique concentrations and creative jobs that can be found in almost any location.

All the Carrizo Plain National Monument Counties have higher percentages of creative workers than the rest of the U.S., while Santa Barbara and San Luis Obispo Counties are also more creative than the rest of California (Table 4). The Center for the Study of Rural America (2006b) found that a creative workforce is positively correlated with growth in employment, meaning that the high level of creative workers in the Monument Counties may be another indication of the potential for the Counties in the Monument Economic Region for growth. It also presents an opportunity to take advantage of their natural amenities, including the Monument, to retain and attract more creative and innovative workers. Promotion of these natural amenities would increase the skill surplus, and attract entrepreneurs.

The Monument Counties' highly creative population also serves as a positive indicator of future economic success, and lessens the impacts of a lack of skilled workers. Again, promotion of the Monument and other protected public lands in the area, along with the overall high amenity index, will help increase this already robust indicator and enhance the region's economic prospects.

### ***Skill Surplus***

The Center for the Study of Rural America has measured the level of underemployed high skill workers in each county, referring to these folks as an areas "skill surplus (Moore 2005)." In order to attract high-skill, high wage industries, rural areas must have a supply of skilled workers. The Center has calculated the skill surplus for each county in the U.S.

Like the nation and the state of California, the Monument Counties all show a deficit of skilled workers (Table 4). However, the Monument Counties all have higher levels of skilled workers than the rest of the U.S. Furthermore, both San Luis Obispo and Santa Barbara Counties have higher levels than that of the state. These data also show that the deficit of skilled workers has increased between 1990 and 2000 (the most recent data available). The presence of the Monument and other human and natural amenities in the area can certainly enhance the attractiveness of the Monument Counties to skilled workers and may over time help alleviate the deficit.

**Table 4. Workforce Indicators for the Carrizo Plain National Monument Counties**

	% of the Workforce In Creative Occupations <sup>a</sup>	Supply of high skill workers <sup>b</sup>	Estimated demand for high skill workers <sup>c</sup>	Surplus/Deficit
Kern County	18	15.0	23.1	Deficit
San Luis Obispo County	25	25.7	28.6	Deficit
Santa Barbara County	27	28.0	29.0	Deficit
Average of all California Counties	23	22.7	24.5	Deficit
Average of All U.S. Counties	17	17.8	20.5	Deficit

<sup>a</sup> Calculated by the Center for the Study of Rural America, Summer 2006

<sup>b</sup> Share of labor force with at least a college degree

<sup>c</sup> Calculated by the Center for the Study of Rural America, Winter 2004, Data from U.S. Census EEO File, 2000

## Entrepreneurship

Business owners create jobs and wealth in a local economy and stimulate growth as the income and employment they generate filters through the economy. The Center for the Study of Rural America ties entrepreneurship and long-term economic growth together (Low 2004). Entrepreneurs can have both small and large impacts in local communities. Some small businesses may not produce large employment or income benefits; however, they enhance the local quality of life and the level of human amenities (for example local restaurants may not produce large numbers of jobs, but do contribute to the area’s amenity index). Others bring both direct and indirect employment and income. The Center for the Study of Rural America (Low 2004) calculates both a measure of the quantity of entrepreneurs (as a proportion of overall employment) and two measures of the quality of entrepreneurs. The first indicator is the average personal income earned by entrepreneurs. The second measure of entrepreneurial quality is the share of business receipts that are proprietors’ income – the “value added.” A higher share is an indication that the business owner’s skills and knowledge are among the most important inputs to the business. This is yet another indication of a high quality, skilled workforce.

All three of the Monument Counties have high levels of entrepreneurship, but with incomes lower than California and the rest of the U.S. (Table 5). Both the income and the “value added” measure for Kern County are higher than the other two Monument Counties. San Luis Obispo County has the highest proportion of entrepreneurs.

**Table 5. Entrepreneurship Indicators for the Carrizo Plain National Monument Counties**

	Entrepreneurs as a % of Total Non-Farm Employment <sup>a</sup>	Average Income of Entrepreneurs <sup>a</sup>	Proprietor Income as a Proportion of Business Receipts <sup>b</sup> (Value Added)
Kern County	19%	\$27,088	60%
San Luis Obispo County	27%	\$26,439	42%
Santa Barbara County	23%	\$26,403	43%
Average of all California Counties	22%	\$33,042	55%
Average of All U.S. Counties	18%	\$30,193	47%

<sup>a</sup> Calculated using the indicator definitions from the Center for the Study of Rural America  
Data source: Bureau of Economic Analysis (2005 data)

<sup>b</sup> Calculated by the Center for the Study of Rural America, Summer 2006  
2002 non-farm proprietor income (BEA) / 2002 non-employer receipts (Census)

Thompson et al. (2006) studied rural economies and found that areas with higher levels of entrepreneurship experienced higher employment growth between 1972 and 1999. Low et al. (2005) analyzed the characteristics of rural economies to assess their potential for entrepreneurship and economic growth. They found that lifestyle amenities, local workforce skills, access to capital and information and innovative activity were the strongest indicators of an area's ability to attract and maintain entrepreneurial activity.<sup>11</sup>

Most of the Census County Divisions within the Monument Economic Region have a higher percentage of income coming from entrepreneurs than the state or the nation as a whole, and at the same time lower percentages of wage and salary income (Table 6). These data corroborate the finding above for the Monument Counties that indicates a high level of entrepreneurial activity in the Monument Economic Region by giving an indication of the level of entrepreneurship in the more focused Monument Economic Region.

<sup>11</sup> Other factors contributing to higher levels of entrepreneurship were a higher number of foreign-born citizens. Rasker et al (2004) found that rural counties with higher numbers of newcomers were more likely to experience greater economic growth. While the Monument Counties currently have a low percentage of new migrants, as the area attracts new residents they will provide an infusion of new energy and ideas that will further support entrepreneurship in the Economic Region. Source: U.S. Department of Commerce, Census Bureau Data, compiled by the Economic Profile System for Communities (EPSC), available at: <http://www.sonoran.org/eps/>

<b>Table 6. Sources of Income in the Carrizo Plain National Monument Economic Region</b>		
	Percentage of Total Personal Income	
	Self-employment Income	Wage or salary income
Kern County		
Westside CCD	7.07%	69.08%
Taft area	2.73%	69.92%
San Luis Obispo County		
San Luis Obispo CCD	9.08%	65.20%
Atascadero CCD	10.70%	67.57%
Arroyo Grande CCD	9.72%	62.03%
Santa Barbara County		
Cuyama CCD	12.21%	70.78%
Santa Maria Valley CCD	6.90%	69.06%
California	7.80%	73.61%
United States	5.86%	74.58%
<i>Source: U.S. Department of Commerce, Census Bureau Data, compiled by the Economic Profile System for Communities (EPSC), available at: <a href="http://www.sonoran.org/eps/">http://www.sonoran.org/eps/</a></i>		

Research into the motivation that drives entrepreneurs and businesses to choose particular locations consistently finds that amenities and quality of life top the list (Rasker and Hansen 2000, Snepenger et al. 1995, Rasker and Glick 1994, Whitelaw and Niemi 1989). Managing the Monument for its primitive and wild character presents an opportunity to attract more small businesses into the area to further enhance this sector.

**Other Regional Asset Indicators**

The indicators discussed above are the strongest predictors of economic growth for rural areas. There are several other indicators that, while not as closely linked with economic growth, deserve a brief discussion. Although not correlated explicitly with economic growth, the level of innovation in a region contributes to economic diversity and opportunities for high skilled workers. The Center for the Study of Rural America (2006c) uses the average number of patents per capita as an indicator of the level of innovation in an area.

Household wealth (measured by home values, agricultural land values and investment income) provides insight into a region's resource base for growth (Low 2005a). It is an indication of the level of potential capital available for new and existing businesses in an area. It also indicates stable consumer demand in an area.

Available capital (measured by bank deposits) is similar to household wealth in that bank deposits also represent a source of available capital (Low 2005b). This capital provides an important funding source for loans or new business which in turn increase a region's level of entrepreneurship. The Center for the Study of Rural America measures both the current depth of banking deposits and the evolution of this depth over time to gauge a region's potential available capital.

Finally, an area's level of infrastructure also reflects its ability to attract new businesses, create new jobs and stimulate demand for goods and services (Center for the Study of Rural America 2006d). An area must have access to highways, airports and telecommunication infrastructure in order to move goods, people and ideas in and out of a region. It should be noted that the proximity of the Monument and the Taft Area to Interstate 5 and the proximity of other key regional highways has two benefits. The transportation infrastructure will provide the necessary access to markets and clients for potential new businesses and new residents and it makes the Monument highly accessible to tourists from the large metro areas of Los Angeles and San Francisco as well as other cities and towns in the region. Out of state visitors are also likely to fly into the state via San Francisco or Los Angeles and having such easy access to the Monument will make visitation easier and thus more likely. This may have a "feedback" effect as tourists sometimes become new residents and business owners (Snepenger et al. 1995, Rudzitis and Johansen 1989).

The importance of communication and other infrastructure is especially true in this era of high tech communication that allows many workers and businesses greater flexibility in locating their enterprises. Robust infrastructure attracts and supports many of the other economic indicators discussed above. Rasker et al (2004) note that the commuting distance (via highways) to metropolitan areas with commercial air transportation can determine whether an area will grow and prosper. The Center for the Study of Rural America includes highways, airports and internet accessibility in their infrastructure index.

Rather than go into great detail about these additional indicators, we have done a qualitative comparison with the state and the rest of the country for each of the Monument Counties (Table 7).

Compared with:	Kern County		San Luis Obispo County		Santa Barbara County	
	Calif.	U.S.	Calif.	U.S.	Calif.	U.S.
Innovation indicator (patents per 10,000 people)	↓	↓	↓	↑	↑	↑
Household wealth indicators						
Home values	↓	↑	↑	↑	↑	↑
Agricultural land value	↓	↑	↑	↑	↑	↑
Investment income	↓	↓	↑	↑	↑	↑
Banking deposit depth in 2002	↓	↓	↓	↓	↓	↓
<i>Change 1980-2002</i>	<i>Decreased</i>		<i>Increased</i>		<i>Increased</i>	
Infrastructure index indicator	↓	↑	↓	↑	↑	↑
↑ = the indicator is higher in the County, ↓ = the indicator is lower for the County <i>Source: Center for the Study of Rural America, Federal Reserve Bank of Kansas City</i> <a href="http://www.kansascityfed.org/home/subwebnav.cfm?level=3&amp;theID=9602&amp;SubWeb=12">http://www.kansascityfed.org/home/subwebnav.cfm?level=3&amp;theID=9602&amp;SubWeb=12</a>						

The Regional Asset Indicators described above can be divided generally into those having to do with an area’s lifestyle, with its workforce, or with its ability to support businesses. Overall the Carrizo Plain Economic Region is well-equipped for economic success. Many of the Regional Asset indicators for the Economic Region are higher than the state or national averages, in some cases higher than both. As the discussion above shows, with few exceptions, most of the region has the needed human capital, financial capital and infrastructure for a prosperous economy. Parts of the region lag behind the state and/or the nation in skilled workers. However no part of the region lacks the broadly defined human amenities and natural amenities that draw entrepreneurs and skilled workers to an area (McGranahan 1999).

These amenities may be the key to enhancing the other Regional Asset Indicators in the Monument Counties and improving the overall economic potential of the area. The Monument is likely to be a factor in this potential.

## **Economic Benefits of Active Recreation and Management for Natural Amenities**

Local and regional economies benefit from non-motorized recreation and tourism activities. Over ten million people participated in wildlife-associated recreation (hunting, fishing, and wildlife watching) in California in 2006, generating \$7.7 billion in expenditures (U.S. Department of Interior Fish and Wildlife Service and U.S. Department of Commerce Census Bureau 2007).

Management of the Monument must take into consideration the long-term health of the ecosystem and the role that this area plays in the local economy. One way to ensure that the ecosystems and wildlife habitat in the Monument are available for the enjoyment and education of future generations would be to limit activities that could harm these values, such as controlling the amount of motorized travel in the Monument, limiting the number of roads and fences that cross the landscape, and addressing the potential impacts of oil and gas drilling of privately owned mineral rights.

According to the Outdoor Industry Foundation, 162 million Americans participate in non-motorized outdoor recreation each year (Outdoor Industry Foundation 2006a), spending more than \$298 billion on gear and recreation annually (Outdoor Industry Foundation 2006b). This spending spurs other spending in local economies that generates significant local tax revenue—making the total national economic contribution of outdoor recreation more than \$730 billion (Outdoor Industry Foundation 2006b). More than three-quarters (78 percent) of Americans living in the West participate in non-motorized outdoor activities (Outdoor Industry Foundation 2006a). In California, activities like hunting and fishing, hiking, bicycling, and skiing contribute \$46 billion to the state's economy, generating over 400,000 jobs. Outdoor recreation by residents and tourists alike is an important component of western economies.

Many national level studies indicate that the vast majority of Americans participate in non-motorized recreation such as walking, hiking, bird-watching and camping (Cordell et al. 2004, USDA Forest Service 2004), and that most Americans see these as important opportunities to use their public lands (Shields et al. 2002). Non-motorized recreation brings dollars into communities and helps protect the amenities that are attracting these dollars. Research conducted

by the U.S.D.A. Forest Service has shown that non-motorized recreation participants spend as much per day as their motorized counterparts (Stynes and White 2005).

## **What Role Can the Carrizo Plain National Monument Play in the Economic Prosperity of the Region?**

As the preceding economic trends and indicators imply, the Carrizo Plain National Monument Economic Region has in place many of the assets and characteristics that will allow it to enfold the Monument into a regional economic development strategy that will have a high probability of sustainable success.

### **MONUMENT VISITORS HAVE A POSITIVE IMPACT**

The Carrizo Plain National Monument Economic Region is especially well-suited to benefit from recreation and tourism, including that associated with the Monument. As discussed above, outdoor recreation and, specifically non-motorized recreation to enjoy landscapes and wildlife, is an activity enjoyed by most Americans. The Carrizo Plain National Monument already draws visitors. As noted by BLM:

Winter and spring are prime use seasons when people come to learn about the area's ecology and view some of California's most spectacular wildflower displays. Other visitors access the area to hunt, hike, camp or just relax.<sup>12</sup>

The Carrizo Plain National Monument attracts an average of 30,000 visitors per year, and during the extravagant wildflower season of 2004-2005 visitation increased by 50%, to an estimated 45,000 visitors. BLM staff have observed a steady increase in visitation to the Monument at all seasons of the year including summer. According to BLM, visitation will likely increase when the Monument's management plan is finalized, due to the increased attention and availability of information that comes with Monument designation and a formal management document.<sup>13</sup> As stated by the agency: "This national designation will attract the attention of not only the visiting public, but also federal and state agencies, private organizations, and schools and universities interested in environmental education or research opportunities."<sup>14</sup> This prediction also correlates with the demographic trends of the Monument Economic Region and

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<sup>12</sup> BLM Planning Update, Spring 2007.

([http://www.blm.gov/style/medialib/blm/ca/pdf/bakersfield/carrizo.Par.16444.File.dat/Spring\\_Newsletter-web.pdf](http://www.blm.gov/style/medialib/blm/ca/pdf/bakersfield/carrizo.Par.16444.File.dat/Spring_Newsletter-web.pdf)).

<sup>13</sup> Personal communication with the Monument Manager in March 2008.

<sup>14</sup> Carrizo Plain National Monument Frequently Asked Questions (<http://www.blm.gov/ca/st/en/fo/bakersfield/Programs/carrizo/FAQ.html> accessed January 24, 2008).

the State of California, as discussed above, which are also likely to add to the value and use of the Monument.

Recent research has shown that public land visitation is increased when the recreation and scenic values of the land is recognized through official designations. Weiler (2005) found that over the course of 20 years National Park Service Monuments that were re-designated to National Parks saw an increase in of nearly 13,000 annual visits. Furthermore, the increase in visitation came mostly from those traveling large distances to visit the new National Parks. He also found that this increase for the new National Parks did not come at the expense of visits to other parks, but rather may have been the result of tourists adding the newly designated Parks to their travel itineraries. It is also interesting to note that visitation to the National Parks in the study increased even in times of economic downturn, indicating that the presence of highly visible public lands may be an asset to communities that can help mitigate the vagaries of the national economy. As people's income contracts, such natural areas may be seen as affordable family vacation destinations, while other, more expensive, options may suffer.

Surrounding communities, such as San Luis Obispo, Santa Maria, Paso Robles and Pismo Beach, already provide recreation tourism and destinations that include wineries, beaches and recreation in the nearby Los Padres National Forest. These communities have airports and freeways that make them accessible and frequent destinations for a large portion of California. Further, as noted by the BLM, "this vast undeveloped valley exists just 100 air miles north of Los Angeles."<sup>15</sup> The communities surrounding the Carrizo Plain National Monument provide additional destinations that could serve as areas from which to extend visits to include the Monument.

Occupations which could be classified as part of the tourism industry include "arts, entertainment and recreation" and "accommodation and food services." These two industries already account for a considerable portion of the employment in the Monument Economic Region (Table 8). Even in Kern County, where mining (which includes the oil and gas industry) plays a more dominant role, tourism accounts for between six and seven percent of total employment. These industries are part of a large and diverse service sector in the Economic Region and can form a basis upon which tourism can play a greater role in the future.

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<sup>15</sup> BLM Planning Update, Spring 2007.

Kern County		
Westside CCD		7.10%
Taft Area		5.92%
San Luis Obispo County		
San Luis Obispo CCD		15.29%
Atascadero CCD		7.51%
Arroyo Grande CCD		10.97%
Santa Barbara County		
Cuyama CCD		5.92%
Santa Maria Valley CCD		8.02%
United States		7.87%
California		8.18%
* Tourism consists of Arts, Entertainment, Recreation, Accommodation and Food Services Source: U.S. Department of Commerce, Census Bureau Data, compiled by the Economic Profile System for Communities (EPSC), available at: <a href="http://www.sonoran.org/eps/">http://www.sonoran.org/eps/</a>		

Travel has a large economic impact in all three of the Monument Counties, according to a report by Dean Runyan Associates (2007). Travel spending in 2005 was over a billion dollars in each county and tourism generated thousands of jobs in the area as well (Table 9).

	Travel Spending	Employment (jobs)
Kern County	\$1,080,000,000	13,610
San Luis Obispo County	\$1,025,300,000	16,460
Santa Barbara County	\$1,367,200,000	16,170
Source: Dean Runyan Associates. 2007. California Travel Impacts by County		

Tourism tied to the Carrizo Plain National Monument and other area attractions can have a positive impact on other sectors of the economy as well. Notes Ray Hatch, former mayor of Taft and member of the Monument Advisory Committee: “I believe our economy, and that of all

the gateway communities, will experience real benefits from tourism to the Carrizo Plain National Monument.”<sup>16</sup>

### **PROTECTIVE MANAGEMENT OF THE MONUMENT WILL INCREASE BENEFITS TO LOCAL COMMUNITIES**

Since the area’s recognition as an important natural area, designation as a National Monument in 2001 and subsequent management as part of the BLM’s National Landscape Conservation System, the Carrizo Plain has benefited from management decisions that protect the natural and cultural attributes for which it was designated.

Sound management of the Carrizo Plain National Monument will increase the benefits to the communities in the Monument Economic Region from recreation and tourism associated with the Monument. BLM’s National Landscape Conservation System, which includes the Monument, is managed to protect “landscapes” and their undisturbed “scientific values, including cultural, archaeological, biological, social, paleontological, and geologic resources.”<sup>17</sup> As touted by the BLM, “In a crowded West, NLCS lands are special. They offer havens of solitude and a reminder of the West as it originally was. The BLM is proud to be stewards of these unique places.”<sup>18</sup> Residents of other communities near BLM Conservation System lands are already experiencing some of the benefits, both tangible and intangible. Cal French, long-time resident of San Luis Obispo and chair of the CA/NV Regional Conservation Committee of the Sierra Club, describes how he feels about the nearby National Monument: “My visits to the Carrizo Plain National Monument restore my peace of mind, revealing the true grandeur of the natural world in its wild state.”<sup>19</sup>

The BLM’s Conservation System mission is also reflected in its stated mission for management of the Carrizo Plain National Monument:<sup>20</sup>

Manage the Carrizo Plain National Monument so that indigenous species interact within a dynamic and fully functioning system in perpetuity while conserving unique

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<sup>16</sup> Ray Hatch. April 10, 2008. Personal Communication.

<sup>17</sup> U.S. Department of the Interior, Bureau of Land Management, Instruction Memorandum No. 2007-116 – Implementation of the National Landscape Conservation System Science Strategy [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2007/im\\_2007-116\\_.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2007/im_2007-116_.html)

<sup>18</sup> BLM, NLCS Home Page ([http://www.blm.gov/wo/st/en/prog/blm\\_special\\_areas.1.html](http://www.blm.gov/wo/st/en/prog/blm_special_areas.1.html)).

<sup>19</sup> Cal French. April 11, 2008. Personal Communication.

<sup>20</sup> Carrizo Plain National Monument Mission Statement ([http://www.blm.gov/ca/st/en/fo/bakersfield/Programs/carrizo/mission\\_statement.html](http://www.blm.gov/ca/st/en/fo/bakersfield/Programs/carrizo/mission_statement.html)).

natural and cultural resources and maintaining opportunities for compatible scientific research, cultural, social and recreational activities.

In addition to highlighting the values of these landscapes, the BLM's management approach for the Conservation System provides special focus on local communities. For instance, "the BLM is working with local residents, particularly with regard to amenities such as food services and lodging, which will be located in communities adjacent to NLCS lands."<sup>21</sup> For the Carrizo Plain National Monument, these services will be located within and benefit the Monument Economic Region. While there are some visitor services within the Monument, the BLM emphasizes that there are only "minimal facilities available" without even drinking water or gasoline.<sup>22</sup> It is important to note that Taft is now an official gateway community to the Monument.

The recently-released NLCS Science Strategy emphasizes the importance of both gaining scientific understanding of the resources and landscapes of the Monument and applying this understanding to management of the Monument. It states:

The NLCS must protect the scientific and other natural and cultural resources for which its units were designated, which requires an understanding of what and where these values are, what condition they are in, and how best to manage them.<sup>23</sup>

Anecdotal evidence from other areas supports the assertion that protected public lands, especially the new units of the Conservation System are good for local economies. Residents in around Palm Springs have embraced their public lands, especially the Santa Rosa San Jacinto Mountains National Monument and celebrate the lands "that provide such spectacular scenery, wildlife, and recreation for our growing Coachella Valley communities."<sup>24</sup> Multiple events and outings are offered in the Fall, Winter and Spring to guide and educate visitors about the natural and cultural history of the Monument.

In Montana, BLM's NLCS has had a positive impact on surrounding communities. Says Great Falls Mayor Randy Gray, "I would like to take this opportunity to offer my personal perspective on what makes the BLM's Conservation System an invaluable benefit to my city and

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<sup>21</sup> Bureau of Land Management NLCS Homepage ([http://www.blm.gov/wo/st/en/prog/blm\\_special\\_areas/NLCS.1.html](http://www.blm.gov/wo/st/en/prog/blm_special_areas/NLCS.1.html))

<sup>22</sup> Carrizo Plain National Monument Visitor Services (<http://www.blm.gov/ca/st/en/fo/bakersfield/Programs/carrizo/goodwin.html#location>).

<sup>23</sup> Available from: <http://www.blm.gov/nhp/efoia/wo/fy07/im2007-116.htm>

<sup>24</sup> Friends of the Desert Mountains, available from: <http://www.fotdm.org/monument.html>

other gateway communities. We are lucky enough to have three Conservation System units in our vicinity... These outstanding resources allow not only for recreation, but for the exploration of our nation's history."<sup>25</sup> In his testimony to the U.S. House of Representatives he goes on to describe how the presence of these lands and their management to maintain the natural amenities has drawn economic activity to the city, "These special places have made Great Falls an attractive community for people to establish homes and businesses and to enjoy the benefits and experience the big sky country as it was meant to be."<sup>26</sup>

## **PLANNING FOR AMENITY DEVELOPMENT**

Well-managed public lands can lead to development that protects natural amenities while also attracting new residents to the recreation and scenic amenities they provide. While amenity development may be desirable, it does—like any development—have economic and ecological costs (Hansen et al. 2002, Rasker et al. 2004). In fact, these costs appear similar to the costs associated with industries such as oil and gas extraction. For example, negative ecological effects of amenity development can include loss of native species, changes in natural disturbance regimes (such as wildfires) and the spread of invasive species (Hansen et al. 2002). In addition, areas that grow too quickly, regardless of the drivers of this growth, can experience rising housing costs (Morton 2000, Rasker et al. 2004). Rising housing costs can squeeze long-time residents out of the area and diminish the social amenities that drew new residents to the area in the first place. Community planners must prepare for these possibilities and develop strategies to ensure that an "amenity boom" doesn't have the same negative impacts as an oil and gas boom.

The Sonoran Institute (2007) succinctly states the challenges faced by growing communities in the West: "Ranches and open space are giving way to subdivisions. Homes and jobs are often far apart, and streets are gridlocked. Many rural communities outgrow their small town character. Retirees also look south of the border for affordable, resort-style living. Sources of energy and water are strained."

Communities that actively plan for amenity-driven growth are better able to face the related challenges and can find a balance between growth and maintaining their quality of life

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<sup>25</sup> Randy Gray. 2007. Testimony Before the Natural Resources Subcommittee on National Parks, Forests and Public Lands, United States House of Representatives, Hearing on H.S. 2016, the National Landscape Conservation System Act, June 7, 2007.

<sup>26</sup> Gray 2007.

(Howe et al. 1997). Communities that engage the broadest spectrum of residents in a planning process based on a sound understanding of local resources often fare best. Most successful communities also actively protect local amenities by purchasing open space and implementing other strategies, such as conservation easements, that complement the existing management of local public lands. The integration of private and public land management also helps to ensure that the ecological values and amenities of open space and wildlands are protected (Hansen et al. 2002). By employing such strategies, local communities can slow down the pace and scale of amenity-based development, and ensure that scenic beauty, small-town character and a sense of community are not sacrificed.

The Carrizo Plain National Monument Economic Region can capitalize on its wealth of natural amenities and still retain the high quality of life that residents treasure by maintaining a diverse economy (including a diverse service sector), maintaining affordable housing, developing carefully planned growth guided by zoning and protecting open space (including agricultural lands and ranches). Ensuring that the Carrizo Plain National Monument is managed to protect and enhance the incredible values for which the Monument was established will allow the Carrizo Plain National Monument Economic Region to reach these goals.

## **Discussion and Conclusion**

The Carrizo Plain National Monument clearly has the potential to be an asset for the Economic Region. Our examination of the Regional Asset Indicators and demographic and economic trends shows that the counties and communities in the region possess many of the assets found to correlate to economic growth and prosperity. At the same time we have also identified that these communities could benefit from an influx of new residents and new industries.

Ongoing research shows a strong correlation between economic growth and both the protected public lands and the level of amenities present in an area. While the Carrizo Plain National Monument Region already has many amenities, some of the communities nearest to the Monument have had an historic focus on only a few industries. The presence and management of the Monument can serve to attract new businesses, which will diversify the economies of these neighboring communities.

Tourism can also serve to diversify the local economies in two ways. First, industries associated with tourism can provide a range of jobs for workers in the region. Second, people who visit an area as a tourist may choose the location for permanent residence; research has shown that many entrepreneurs choose the location for their businesses after first visiting an area as a tourist and retirees also often make location decisions in this way.

While an historic emphasis on resource extraction has been important to the area, it is clear that economic diversity will be the key to a more sustainable economy. The Monument can serve as a catalyst for increasing the variety of industries, increasing this critical diversity. This is especially important for the Taft Area, which has had a higher level of resource dependence than the other parts of the Monument Economic Region. The Taft Area is poised to become the gateway to the Monument, which may enable this part of the region to become more integrated into the more well-developed amenity economy seen in the western portion of the Economic Region. It is our hypothesis that this will allow the Taft region to benefit from the other attractions in the area, reinforcing a beneficial, synergistic relationship between the Monument Economic Region as a whole and the Carrizo Plain National Monument

For the local communities to reap the most benefit from the economic conditions identified in this report, the management plan for the Monument must ensure that the Monument values are protected. Of course, these values are important simply for their own sake and managing these lands to protect them is critical to retain this natural and cultural history, as enumerated in the Monument Proclamation. These values can also be viewed as amenities, which will enhance the attractiveness of the Monument Economic Region for tourists, new business owners, and new and existing residents.

This report has presented an analysis of the economic trends and the Regional Asset Indicators for the area surrounding the Carrizo Plain National Monument. These data paint a picture of a region potentially well-suited to develop and nurture a balanced, diversified, and sustainable economy that depends on and benefits from both the protection of the natural amenities of the area and the extraction of natural resources.

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## APPENDIX-INDUSTRY CLASSIFICATION USING SIC AND NAICS

Over the years there have been changes in the way that government agencies classify various industries. Income and employment data from the Bureau of Economic Analysis and the Bureau of Labor Statistics for 1969-2000 are classified according to the Standard Industry Classification system (SIC), while the most recent data (2001 and forward) are classified by the North American Industry Classification System (NAICS). NAICS was developed jointly by the United States, Canada and Mexico in order to make statistics comparable across all three countries.

The NAICS provides greater detail for the service and professional sectors, which are of growing importance in the rural West and indeed all over the country. This classification scheme also includes some emerging industries such as "information," which includes the growing Internet and information phenomenon. The Bureau of Economic Analysis's Regional Economic Information System (REIS) uses SIC to classify industries and the Sonoran Institute's Economic Profile System uses SIC data from the REIS in order to show trend analyses, along with NAICS data. Despite certain incompatibilities between these classification systems, one can certainly look at a general picture of the economy over time by using both sets of data, and we have used both SIC and NAICS data to show long-term trends in this report.

For Figures 4, 5 and 6:

Income:

- *Service* sector income consists of the following SIC sectors (1969-2000):
  - Services
  - Eating and Drinking Placesand the following NAICS sectors:
  - Professional and technical services
  - Management of companies and enterprises
  - Administrative and waste services
  - Educational services
  - Health care and social assistance
  - Arts, entertainment and recreation
  - Accommodation and food services
  - Other services
- *Transportation and public utilities* sector income consists of the SIC category of the same name and the NAICS categories "Utilities" and "Transportation and warehousing."
- *Agricultural services, forestry and fishing* sector income consists of the SIC category of the same name and the NAICS category: "Forestry, fishing, related activities."
- *Finance, insurance and real estate* sector income consists of the SIC category of the same name and the NAICS categories: "Finance and insurance" and "Real estate and rental and leasing."
- Income data for "Eating and drinking places" was subtracted from the SIC "Retail trade" category for 1969-2000 (Retail trade does not include this sector under the NAICS for 2001-2005).
- For the following industries the SIC and NAICS income data are combined with no modifications:
  - Construction
  - Wholesale trade
  - Mining
  - Manufacturing

Employment:

- *Transportation and public utilities* sector employment consists of the SIC category of the same name and the NAICS categories "Utilities" and "Transportation and warehousing."

- *Agricultural services, forestry and fishing* sector employment consists of the SIC category of the same name and the NAICS category: “Forestry, fishing, related activities.”
- Finance, insurance and real estate sector employment consists of the SIC category of the same name and the NAICS categories: “Finance and insurance” and “Real estate and rental and leasing.”
- For the following industries the SIC and NAICS employment data are combined with no modifications:
  - Services
  - Construction
  - Retail trade
  - Mining
  - Manufacturing
  - Wholesale trade

For Figures 7, 8 and 9:

Income:

- *Professional and Service* sector income consists of the following SIC sectors (1969-2000):
  - Services
  - Eating and Drinking Places
  - Finance, insurance and real estate
 and the following NAICS sectors (2001-2005):
  - Finance and insurance
  - Real estate and rental and leasing
  - Professional and technical services
  - Management of companies and enterprises
  - Administrative and waste services
  - Educational services
  - Health care and social assistance
  - Arts, entertainment and recreation
  - Accommodation
  - Food services and drinking places
  - Other services, except public administration
- *Farming and Ranching* income consists of the following SIC sectors (1969-2000):
  - Farm proprietors income
  - Farm earnings
  - Agricultural services, forestry, & fishing
 and the following NAICS sectors (2001-2005):
  - Farm proprietors income
  - Farm earnings
  - Forestry, fishing, & related activities
- SIC and NAICS income data for the *Oil and Gas Extraction* sector was combined with no modifications

Employment:

- *Professional and Service* sector employment consists of the following SIC sectors (1969-2000):
  - Services
  - Finance, insurance and real estate
 and the following NAICS sectors (2001-2005):
  - Finance and insurance
  - Real estate and rental and leasing
  - Professional and technical services
  - Management of companies and enterprises
  - Administrative and waste services

- Educational services
- Health care and social assistance
- Arts, entertainment and recreation
- Accommodation and food services
- Other services, except public administration
- *Farming and Ranching* employment consists of the following SIC sectors (1969-2000):
  - Farm proprietors employment
  - Farm employment
  - Agricultural services, forestry, & fishingand the following NAICS sectors (2001-2005):
  - Farm proprietors employment
  - Farm employment
  - Forestry, fishing, & related activities
- SIC and NAICS employment data for the *Mining* sector was combined with no modifications