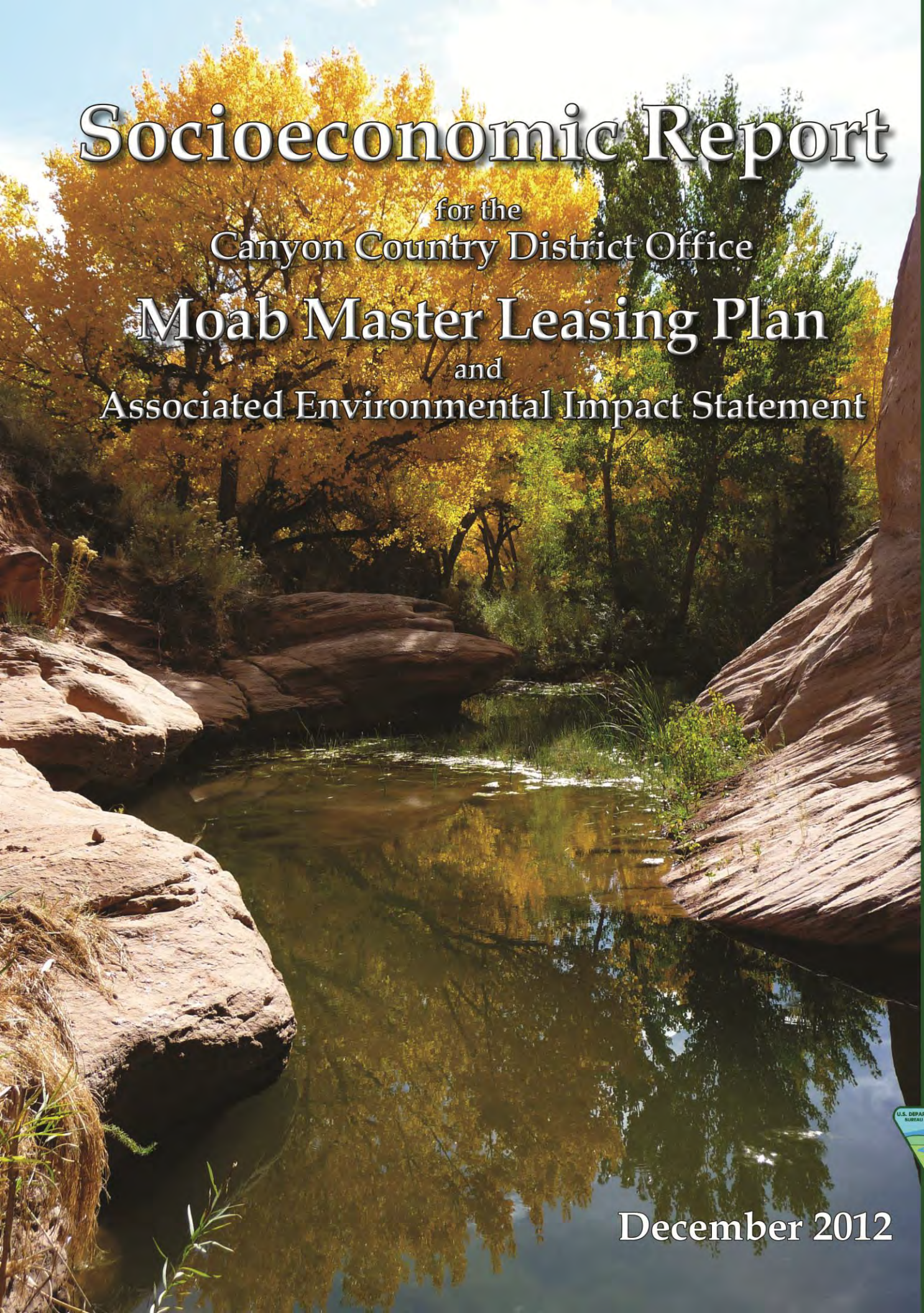

Socioeconomic Report

for the

Canyon Country District Office

Moab Master Leasing Plan

and

Associated Environmental Impact Statement

December 2012

BLM

CANYON COUNTRY DISTRICT OFFICE

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BLM Mission

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

Socioeconomic Baseline Report

for the

Canyon Country District Office

Moab MLP

and Associated

Environmental Impact Statement

Prepared by
United States Department of the Interior
Bureau of Land Management
Canyon Country District Office

December 2012

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ACRONYM LIST

ACS	American Community Survey
AUM	Animal Unit Month
BEA	Bureau of Economic Analysis
BLM	Bureau of Land Management
CDP	Census-Designated Place
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DOGM	Utah Division of Oil, Gas, and Mining
DOI	U.S. Department of the Interior
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
EPS-HDT	Economic Profile System-Human Dimensions Toolkit
ERS	Economic Research Service
FLPMA	Federal Land Policy and Management Act of 1976
FY	Fiscal Year
GOPB	Utah Governor's Office of Planning and Budget
IMPLAN	IMPact analysis for PLANning
LQ	Location Quotient
MLP	Master Leasing Plan
mt	metric tons
NAICS	North American Industry Classification System
NEPA	National Environmental Policy Act of 1969
NVUM	National Visitor Use Monitoring
O&M	Operation and Maintenance
OHV	Off-Highway Vehicle
ONRR	U.S. Office of Natural Resources Revenue
PCAST	President's Council of Advisors on Science and Technology
PCIB	Permanent Community Impact Board
PILT	Payment in Lieu of Taxes
REIS	BEA's Regional Economic Information System
RMIS	BLM's Recreation Management Information System
RMP	Resource Management Plan
ROW	Right-Of-Way
SITLA	Utah School and Institutional Trust Lands Administration
SRMA	Special Recreation Management Area
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service

CHAPTER 1—INTRODUCTION

This Socioeconomic Baseline Report has been prepared to assist in the development of the Department of the Interior (DOI) Bureau of Land Management's (BLM) MLP (MLP) and associated Environmental Impact Statement (EIS) amending the Moab and Monticello Resource Management Plans (RMP). The MLP planning process will specifically consider leasing for oil and gas and potash on about 783,000 acres of BLM public lands. As part of the planning process, socioeconomic information will be used in the development of management alternatives and in the analysis of potential impacts of management alternatives.

Socioeconomics is not a BLM management decision; it is a contextual element for planning. This baseline report addresses social, cultural, and economic conditions and trends within the socioeconomic study area defined below. These conditions and trends affect current and future uses of BLM public land resources. Conversely, decisions made by BLM in the current planning process may have social, cultural, and economic impacts. These impacts may be positive or negative, depending on conditions and on the point of view of stakeholders to BLM public land resources. This report provides socioeconomic background information for the impact analysis later in the planning process. This information can also help inform public discussion during the planning process.

1.1 REGULATORY AND POLICY BASIS

A number of laws, regulations, and policies require social and economic analysis to support BLM land use planning and decision making. The Federal Land Policy and Management Act of 1976 (FLPMA) and the National Environmental Policy Act of 1969 (NEPA) provide the statutory framework for social and economic considerations in land use planning. Section 202(c)(2) of FLPMA requires the BLM to integrate physical, biological, economic, and other sciences in developing land use plans (43 United States Code [U.S.C.] 1712(c)(2)). FLPMA regulations at 43 Code of Federal Regulations (CFR) 1610.4-3 and 1610.4-6 require the BLM to analyze social, economic, and institutional information. Section 102(2)(A) of NEPA requires federal agencies to "insure the integrated use of the natural and social sciences…in planning and decision making" (42 U.S.C. 4332[2][A]). EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994) requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs, polices, and activities on minority populations and low-income populations in the United States. Appendix D, "Social Science Considerations in Land Use Planning Decisions," of the BLM Land Use Planning Handbook (BLM 2005) provides guidance on integrating social science information into the BLM planning process. Various BLM Instruction Memoranda (IMs) provide additional policy guidance relevant to socioeconomic analysis.

1.2 SCOPE

This Socioeconomic Baseline Report provides information *relevant to the types and scope of decisions anticipated in the MLP and the RMP amendments.* The MLP process will provide additional planning and analysis for the MLP planning area prior to new leasing of oil and gas and potash. The outcome of the MLP process could result in new leasing stipulations and development constraints which would require amendments to the Moab and Monticello RMPs. The EIS will analyze likely mineral development scenarios and land use plan alternatives with varying mitigation levels for leasing. Impacts to mineral development and to other BLM resources and resource uses from the level of mineral development provided under each management alternative will be analyzed.

Given the limited scope of this planning action, the topics covered in the baseline are more limited than for a comprehensive RMP/EIS planning effort. In this BLM planning action, there may be socioeconomic impacts related to:

- Restrictions on mineral development; specifically oil and gas leasing and leasing of potash.
- Impacts to social and economic values associated with recreation, based on visual and other impacts of mineral development on the recreation experience and potential restrictions on recreation activities in and around mineral development sites.

Conceivably there could be some impacts to these additional resource uses:

- Livestock grazing
- Lands and realty programs; for example, film permits
- Nonmarket values
- Tribal uses

Therefore, the focus of this baseline (particularly in the BLM Public Land Uses and Values chapter) is on information relevant to mineral development and production, and recreation. Some consideration is given to the additional resource uses listed immediately above.

1.3 STRUCTURE AND SOURCES

This report is divided into six chapters:

- Introduction – This chapter describes the purpose, regulatory and policy basis, scope, and structure of the report.
- Overview of the Socioeconomic Study Area – This chapter defines the geographic area covered, and provides a high-level characterization of land ownership and current population.
- Social and Cultural Conditions – This chapter identifies and profiles socioeconomic study area population trends, demographics, and other social and cultural characteristics.
- Economic Conditions – This chapter characterizes the socioeconomic study area economy in terms of employment, earnings, firms, sources of personal income, economic base, and public finance and government expenditures.
- BLM Public Land Uses and Values – This chapter profiles BLM public land uses, describes some of the economic and social implications of those uses, and estimates current contributions to the local economy that are attributable to uses of BLM resources.
- Conclusions – This chapter summarizes key points from the earlier material.

Within the social/cultural and economics chapters, most data is presented for each county within the socioeconomic study area. Utah and U.S. data are often presented for comparison. In some cases data and qualitative information are presented for smaller geographies within the counties.

Multiple demographic and economic data sources are used in this report. The most prevalent sources are the following:

- Economic Profile System-Human Dimensions Toolkit (EPS-HDT): This is an online tool sponsored by BLM and the U.S. Forest Service (USFS). It draws on a wide variety of data sources, including many of the sources below, to provide economic and demographic data for user-selected counties or groups of counties.

- U.S. Census Bureau, 2010 Census: The Census Bureau has released some but not all information from the 2010 Census. It also does not cover all demographic and population topics. The source described next addresses many topics that the Census does not.
- U.S. Census Bureau, American Community Survey (ACS): The ACS provides demographic and other data between the decennial censuses, using samples of local populations. Smaller geographies such as Grand and San Juan counties and communities in those counties require that data from samples taken in multiple years be combined to provide the most accurate estimates. The most recent ACS data for these geographies is based on samples taken during the five years from 2006 to 2010.
- Bureau of Economic Analysis (BEA): The BEA provides a wide range of data on economic conditions, generally gathered on a quarterly or annual basis. This report draws data from BEA's Regional Economic Information System (REIS) on a number of topics.
- Bureau of Labor Statistics: This source provides data on labor market conditions; e.g., employment and unemployment.
- State and local data sources: A variety of sources are used, including the Governor's Office of Planning and Budget (GOPB); the Utah Department of Workforce Services; DOGM; Utah Geological Survey; Utah Office of Tourism; Utah State Tax Commission; and other state and local sources. Where appropriate, the nature of these sources is described in the text.

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CHAPTER 2—OVERVIEW OF THE SOCIOECONOMIC STUDY AREA

The BLM Canyon Country District Office includes the Moab Field Office and the Monticello Field Office, located in the southeastern portion of Utah. The Moab Field Office administers approximately 1.8 million acres of public surface lands and a similar amount of federal mineral estate, mostly within Grand County. The Monticello Field Office administers approximately 1.8 million acres of public surface lands and 2.5 million acres of federal mineral estate, almost entirely within San Juan County. The lands involved in the current planning action make up part of each Field Office.

For the planning purposes of the MLP and associated RMP amendments, BLM has defined a planning area, a decision area, and a socioeconomic study area, as prescribed in the *BLM Land Use Planning Handbook (H-1601-1)*. Map 2-1 shows the location of the planning area, the two counties of the socioeconomic study area, and the decision area surface lands. Each is described further below.

The *planning area* encompasses about 946,000 acres of BLM lands and other lands in east-central Utah south of Interstate 70. The area borders the town of Moab and wraps around Arches National Park. The western boundary is the Green River and the northeastern boundary of Canyonlands National Park. To the south of Moab, the boundary includes the Indian Creek/Lockhart Basin area between Canyonlands National Park and U.S. Highway 191. This area encompasses a mix of land uses including a wide variety of recreation uses, livestock grazing, and limited oil and gas development. Interest in potash exploration and development is peaking in the area.

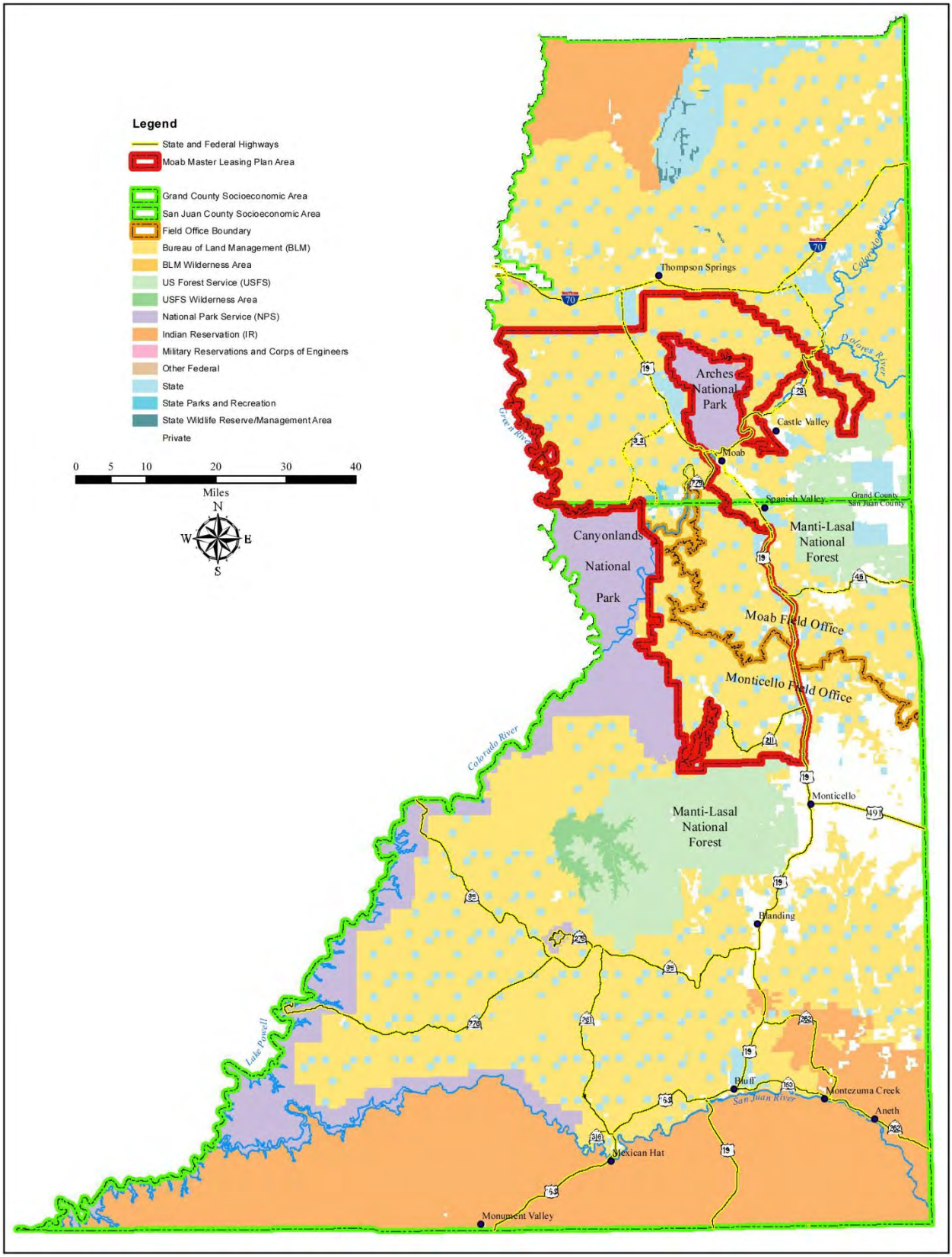
The *decision area* is those lands and resources within the planning area that BLM administers, encompassing a total of approximately 783,000 acres of public surface lands and 798,000 acres of BLM-administered subsurface federal mineral estate.

This baseline report is primarily focused on the *socioeconomic study area*, which is determined by the economic and social relationships between communities in the region and the surface land and subsurface mineral estate managed by BLM. A socioeconomic study area commonly extends beyond the decision area because decisions made by BLM can impact socioeconomic conditions in proximate lands and communities, based on where monies flow and how and where services and goods are obtained. A socioeconomic study area may also be larger than the planning area because key socioeconomic data are only available for geographies (e.g., counties) that extend beyond the planning area.

The socioeconomic study area (sometimes referred to as simply the "study area" in this report) has been defined to include all of Grand and San Juan counties. It is likely that any social or economic impacts from the management alternatives would occur mostly within these two counties. While the geographic extent of the two counties is considerably larger than that of the planning area, including all of the counties is reasonable because of the key role of the county governments in providing public services (e.g., roads, emergency services) related to use of the planning area.

Map 2-1 show the boundaries of the planning area and the two counties of the socioeconomic study area. It also shows the extent of BLM surface lands within the planning area, which together with BLM-administered mineral estate in the planning area (not shown) constitute the decision area. The map also shows BLM surface lands outside the planning area, and other key geographic features.

Map 2-1. Socioeconomic Study Area



Both counties of the study area are located within a major physiographic province known as the Colorado Plateau. The website of the government of Grand County (2012) aptly describes this province:

> *The plateau is drained almost entirely by the Colorado River and its tributaries, which include the Little Colorado, Green, San Juan, and Dirty Devil rivers. Geographically, the Colorado Plateau is located almost entirely in Utah, with small sections extending into the adjacent states of Arizona, New Mexico, and Colorado. Composed mostly of sandstone and limestone, the plateau has been eroded by large rivers and other water and wind sources into huge canyons and other complex erosional forms that make it a rugged, but scenically spectacular, region.*

The geology of the study area includes diverse mineral resources that provide economic benefits. The area's spectacular landscape and many historic sites attract many thousands of tourists annually; the tourism industry is an important component of the local economy. Key recreational resources of the socioeconomic study area include the Colorado and Green Rivers, Arches and Canyonlands National Parks, Natural Bridges and Hovenweep National Monuments, Glen Canyon National Recreation Area, the Manti-La Sal National Forest, and several state parks. Navajo Nation tribal lands cover a significant portion of the southern part of San Juan County. Native American peoples and Mormon settlement of the area are very important aspects of its history and culture.

Table 2-1 shows current land management in the socioeconomic study area. BLM is the largest land manager in both counties. Altogether, the Federal Government owns approximately 72 percent of the land area of Grand County, 61 percent of San Juan County, and 65 percent of the combined counties. In Grand County the second largest landowner is the State of Utah; in San Juan County Indian tribes (primarily the Navajo Nation) together constitute the second largest landowner. The National Park Service, USFS, and private landowners each manage significantly more land—by acres and by percentage—in San Juan County compared to Grand County.

Table 2-1. Land Management in the Study Area

Ownership	Grand County		San Juan County		Study Area	
	Acres	%	Acres	%	Acres	%
BLM	1,550,548	65.8	2,077,653	40.9	3,628,201	48.8
National Park Service	76,470	3.2	588,839	11.6	665,309	9.0
USFS	56,695	2.4	449,923	8.9	506,618	6.8
Other Federal	2,527	0.1	42	0.0	2,569	0.0
State of Utah	371,065	15.8	268,416	5.3	639,481	8.6
Private	101,365	4.3	410,475	8.1	511,841	6.9
Indian Reservation	198,390	8.4	1,279,415	25.2	1,477,806	19.9
Total	**2,357,060**	**100**	**5,074,764**	**100**	**7,431,824**	**100**

Source: BLM Land Status Data as of February 2012.

According to U.S. Census Bureau data as shown in Table 2-2, the total resident population of the socioeconomic study area in 2010 was 23,971. The study area has a number of towns and small cities with concentrated populations, but the majority of the area is very sparsely populated. The overall population density of the study area is 2.1 persons per square mile, which is very low compared to the population density of Utah and the nation.

Table 2-2. 2010 Population, Area and Population Density of the Study Area

	2010 Population	Land Area (Million Acres)	Land Area (Square Miles)	Persons Per Square Mile
Grand County	9,225	2.35	3,671.54	2.5
San Juan County	14,746	5.00	7,819.99	1.9
Study Area	23,971	7.35	11,491.53	2.1
Utah	2,763,885	52.59	82,169.62	33.6
United States	308,745,538	2,260.42	3,531,905.43	87.4

Source: Population—U.S. Census Bureau, 2010 Census, Profile of General Population and Housing Characteristics: 2010 Demographic Profile Data. Land Area—U.S. Census Bureau Quickfacts 2010.

The socioeconomic study area is geographically remote relative to major population centers in the western U.S. For instance, Moab is located the following distances by road from major cities: 234 miles from Salt Lake City, Utah; 355 miles from Denver, Colorado; 368 miles from Albuquerque, New Mexico; 461 miles from Las Vegas, Nevada; and 467 miles from Phoenix, Arizona (distances calculated by Google Maps). With respect to smaller regional population centers, Moab is 113 miles from Grand Junction, Colorado, and 183 miles from Farmington, New Mexico. Southern portions of the study area are somewhat closer to Farmington; for instance, Blanding is 130 miles from Farmington.

The relative remoteness of the socioeconomic study area indicates that modes of transportation to the study area are very important to its economy. This remoteness also means that visitors to the study area are very frequently on multi-day trips and thus must spend money on lodging, food, gas, and other purchases within the study area.

Regional access to the socioeconomic study area is primarily by road. This access is most easily accomplished from Interstate 70, which runs east to west through the middle of Grand County, just north of the MLP planning area. I-70 is the only major east/west route in the study area. U.S. Highway 191 runs south from I-70 through both counties. U.S. Highways 191 and 491 provide access to the study area from the south, through the small communities of northeastern Arizona, northwestern New Mexico, and southwestern Colorado. These highways connect to Interstate 40 far south of the study area's southern boundary.

Additional access to the study area is available by air and railroad. Commercial airline flights are available from a small airport in Moab. Additional commercial air service is available from Grand Junction, Colorado, and Farmington, New Mexico, northeast of Moab and southeast of the study area, respectively. Several study area communities have small airport facilities that are available to private planes; the closest of these to the MLP planning area are in Moab, Monticello, and Blanding. A major rail line that carries Amtrak and freight parallels I-70.

The history of the socioeconomic study area is primarily a story of the native Indian cultures, settlement by Mormon pioneers, agricultural use, development of mineral resources, and recent influxes of residents and tourists attracted by the beauty and recreational resources of the region. The following sketches of local history are excerpted from a publication of the Utah State Historical Society (1988).

Grand County

Much of the Colorado Plateau in prehistoric times was inhabited by the Anasazi. First arriving perhaps as early as the time of Christ, the Anasazi had disappeared by A.D. 1300, probably due to years of drought. Today the remains of their cliff houses and rock art in the canyons delight

explorers. A petroglyph of a mammoth or mastodon on a canyon wall west of Moab suggests occupation by Early Man.

The first white men to enter the present area of Grand County were Spanish explorers who discovered a crossing of the Colorado River at the site of the present highway bridge at Moab. Later Spanish traders and American fur trappers developed the route known as the Spanish Trail, using that crossing and one across the Green River above the present Emery County town of that name.

The first attempt by Mormon colonists to settle the Moab area was a failure. The Elk Mountain Mission reached Moab Valley in 1855 and established a small community, but the Indians who were already farming the fertile Colorado River bottoms regarded them as competition and drove them out after they had been there only a few weeks. Not until the very late 1870s and 1880s did a few Mormon families find it possible to build permanent homes.

Most of the history of Grand County has been the story of small family farms and orchards, mining for potash and uranium, and livestock. Large sheep and cattle companies have found abundant forage for their livestock in the canyons and the LaSal Mountains, and cowboys and outlaws figure prominently in the area's folklore. The uranium boom of the 1950s brought the first real population expansion to the area and saw the creation of a few large fortunes as well as many failures.

Most recently the income from tourism has been the county's major economic resource. Arches National Monument was established in 1929, and consistently increasing numbers of visitors led to its upgrading to National Park status in 1971. During the 1970s and 1980s Moab became perhaps the most important center for river running, mountain-bicycling, and four-wheel drive recreation in Utah.

San Juan County

In prehistoric times the San Juan country was the home of the Anasazi until about 1300 A.D. Their cliff houses, pictographs, and petroglyphs continue to baffle and fascinate visitors. The Basketmakers, the earliest phase of the Anasazi Culture, were first identified and studied in Grand Gulch. The Navajo Indians, who were latecomers to the area, now occupy a large part of San Juan County from the San Juan River to the Arizona border.

Although there were a few white residents along the San Juan River before 1879, the Mormon scouts who planned the famous Hole-in-the-Rock Trail that year began the full-scale settlement of San Juan County. The 180 pioneers who left Escalante in the fall of that year arrived at the present site of Bluff on April 6, 1880.

Farming along the San Juan River bottoms was a chancy proposition, for the treacherous river either flooded or went dry too often for dependable irrigation. Early cattlemen like the brothers Al and Jim Scorup did better in the rough canyon country than the farmers. After a decade of fighting the elements many settlers discovered that life was somewhat easier in the high country around the Abajo Mountains, and the towns of Blanding and Monticello replaced Bluff as San Juan's main focal points.

Mining has been an inconsistent but exciting part of the economy of the county. A gold rush on the San Juan River in the early l890s was short-lived, but miners in Glen Canyon of the Colorado eked a better living from deposits along the river bars. Oil and gas exploration around the turn of the century was productive, and one can still see wells operating along the San Juan River. The uranium boom of the early l950s brought large numbers of people into the area and created a few large fortunes.

At present most residents see tourism as their most promising economic resource, particularly since the creation of Lake Powell in the early 1960s. Rainbow Bridge is the most popular tourist attraction in the county, but the marinas at Hite, Hall's Crossing, and Piute Farms draw large numbers of visitors, and river trips through Cataract Canyon and on the San Juan are also popular.

CHAPTER 3—SOCIAL AND CULTURAL CONDITIONS

This chapter identifies and profiles the population, demographic, and other social and cultural characteristics of the study area. Data are provided at the county and city or town levels, and sometimes at a finer geographic level, depending on relevancy and availability of data. In most cases, data are only available at the county level. In many cases, data are also provided for the state of Utah and the U.S. for comparative purposes.

3.1 COMMUNITIES

The socioeconomic study area includes two counties and a number of small communities. These communities have diverse populations, histories, and economies. The counties and the key communities *near the planning area* are described briefly below (see also the previous chapter).

Grand County spans approximately 2.5 million acres. The Colorado River slices diagonally across the county, and I-70 and a major railroad line run east/west through the middle of the county. The Green River forms the western boundary of the county; the Utah/Colorado state line is the eastern boundary. The area north of I-70 is extremely desolate; most of the county's population is located to the south in Moab and other communities. U.S. Highway 191 is the primary north/south route through the county. Arches National Park, which has the world's largest concentration of sandstone arches, is located entirely within Grand County, just north of Moab. Portions of Canyonlands National Park and the Manti-La Sal National Forest are within the county. Mining was historically the backbone of the county's economy. More recently, tourism and recreation have been the primary economic drivers.

The city of *Moab* is the county seat of Grand County and is the largest population center in the county and in the entire socioeconomic study area as well. The population of Moab was 5,046 persons in the 2010 census. Moab is located in a fertile flatland along the Colorado River. This area was used by the Ancestral Puebloan people prehistorically, and attracted Mormon missionaries and pioneers as early as 1855. It was a center for development of the area's uranium resources in the mid-20th century. More recently, Moab has been a "mecca" for all manner of outdoor recreation enthusiasts, most notably river runners, mountain bikers, and off-highway vehicle (OHV) users. The city provides lodging, restaurants, retail and other services to visitors to Arches National Park and the many other scenic and recreational resources of the area.

Castle Valley Town is a community of 319 persons (2010 Census) located northeast of Moab. A portion of the town lies along the Colorado River. Most of the town lies to the southeast of the river, along Castle Creek up a broad valley that has been used for farming and ranching.

Spanish Valley is an unincorporated community that lies in the valley that extends south from the city of Moab. The Spanish Valley census-designated place (CDP) is located in San Juan County. However, in local usage Spanish Valley refers to the entire valley. The CDP is the most sparsely populated portion of the valley. The entire valley is essentially a suburb of Moab. Some of the taxes of people living within the San Juan County portion of the valley and the Moab zip code (84532) are provided to the city of Moab by San Juan County to support libraries, schools, and other services in Moab used by the Spanish Valley San Juan County residents.

San Juan County encompasses approximately 5 million acres in the southeastern corner of Utah. The Green and Colorado Rivers form the western boundary of the county, the Utah/Colorado state line is the eastern boundary, and the Utah/Arizona state line is the southern boundary. U.S. Highway 191 is the major transportation route, running north/south through the middle of the county. Additional prominent

geographic features of the county include the La Sal Mountains in the northern part of the county, which rise to over 12,500 feet. The San Juan River runs east to west across the southern portion of the county, through a broad valley around and east of Bluff and deep desert canyons west of Bluff to Lake Powell. The lake and the surrounding Glen Canyon National Recreation Area, along with Canyonlands National Park, are among the many recreational and scenic resources of the county. San Juan County has a substantial Navajo population and a significant amount of the county lies within the Navajo Nation tribal lands. Mining was the largest industry in the county as late as the early 1980s. Agriculture has played a large role in the San Juan County economy as well, and even saw job growth in the 2000s. The scenic qualities of the county have supported a very important and growing tourism and recreation industry for many decades.

Monticello is county seat of San Juan County and its northernmost city. It is located just south of the MLP planning area, on U.S. 191. It is the second largest community in the county, with a 2010 Census population of 1,972. Monticello is at the foot of the Abajo (Blue) Mountains and thus provides access to mountain recreation opportunities. Agriculture is also important to the local economy; wheat and other crops are grown immediately north, east, and south of town. Monticello once had a large uranium mill; it is now a Superfund site and has recently been remediated.

La Sal is a small community and CDP located on State Highway 46 north of Monticello and east of the planning area, near the Manti-La Sal National Forest and the La Sal Mountains. It was once a "company town" operated by Redd Ranches.

Blanding is the largest city in San Juan County. Its 2010 Census population was 3,375. The city is located 21 miles south of Monticello on U.S. 191. It is a gateway to the many scenic and recreational opportunities of southern San Juan County. For instance, State Highway 95 runs west from U.S. 191 just south of Blanding, providing access to Natural Bridges National Monument and Glen Canyon National Recreation Area. Blanding also has a strong and continuing agricultural heritage.

3.2 POPULATION GROWTH

Historical population growth of the socioeconomic study area counties and communities from 1970 to 2010 is shown in Table 3-1, based on data from the State of Utah and the U.S. Census Bureau. These figures reflect the primary resident population and do not include second home owners or other non-primary residents.

The study area as a whole grew from 16,300 persons in 1970 to 23,971 persons in 2010, a gain of 7,671 persons, or 47 percent. Roughly two-thirds of this increase was in San Juan County, for a county-specific gain of 52 percent. Roughly one-third of the increase was in Grand County, for a county-specific gain of 40 percent. While both counties grew from 1970 to 2010, the patterns of growth were different. From 1970 to 1980, both counties grew significantly. This largely reflects an upsurge in mineral exploration and development during the 1970s. In the 1980s, San Juan County's population held steady, but Grand County's population (and the population of Moab) dropped significantly. This is attributed to the collapse of the uranium-mining industry in the 1980s (RPI Consulting 2010). Both counties (and Moab) grew in the 1990s. In the 2000s (see the "Percent Change 2000–2010" column in the table), Grand County had stronger growth than San Juan County—9 percent across the decade compared to 2 percent.

The cities within the socioeconomic study area all grew in the 2000s (Moab, 6 percent; Blanding, 7 percent; and Monticello 1 percent). Most of the smaller communities—Castle Valley Town and the CDPs in Table 3-1—lost population. A notable exception was the Spanish Valley CDP. As noted earlier, this is a "suburb" of Moab that is located just across the county line in San Juan County. This area had the largest numerical growth—a gain of 310 persons—of any of the cities or CDPs in the study area.

Together, Moab and the Spanish Valley CDP grew by 577 in the 2000s. This growth plus additional growth in other unincorporated areas near Moab indicate that Moab was the largest engine of population growth within the study area in the 2000s.

Table 3-1 also provides population projections. These are from the 2008 Baseline Population Projections of the GOPB, Demographic and Economic Analysis section (Utah GOPB 2008). The GOPB prepares projections for all of Utah at the county and sub-county levels. The GOPB projections are the official population projections for the state, and are used for many planning purposes. The GOPB uses a consistent methodology across the state, employing both historical growth data and a population forecast model (Donner, pers. comm. 2011). The 2008 GOPB model projected state and county population growth from 2010 through 2060. The sub-county projections were produced by regional Associations of Government analysts controlling to the GOPB county totals—in other words, they were regionally informed allocations of county projections from the state's population growth model. The 2008 projections do not reflect actual population as of the 2010 Census or the impacts of the recent recession. The GOPB has recently prepared revised projections, but these projections have not been finalized. While dated, the projections presented in Table 3-1 are still the official projections of the state.

Both counties and the city of Moab had 2010 actual populations that were less than the 2010 projections prepared in 2008 by the GOPB. This probably reflects the impact of the recession on growth. However, Monticello's actual 2010 population was very close to the projection, and Blanding's population was slightly higher.

The GOPB projects modest amounts of growth to 2020 and to 2030 in both counties and in all the sub-county geographies for which the state makes projections. The GOPB in 2008 projected that the two counties together would grow by 1,580 persons (6 percent) from 2010 to 2020, and 2,154 persons (8 percent) from 2020 to 2030. Note that these percentage growth rates are each for an entire decade; some communities in Utah grew at *annual* rates of 6 to 8 percent in the 2000s. At present, no foreseeable changes are likely to increase the growth rates in the study area to rates similar to the fastest growing communities in the state.

It is important to note that housing growth in the socioeconomic study area in the 2000s was actually stronger than population growth. This reflects the attractiveness of the study area to second home owners, as discussed further in Section 3.4.

Table 3-1. Historical and Projected Population Growth

Geography	Historical Actual Population*					Percent Change 2000–2010	Projected Population**		
	1970	1980	1990	2000	2010		2010	2020	2030
Grand County	6,600	8,250	6,591	8,485	9,225	8.7%	9,693	11,007	11,827
Castle Valley Town	N.A.	239	211	349	319	-8.6%	391	444	477
Moab City	4,793	5,333	3,971	4,779	5,046	5.6%	5,237	5,946	6,388
Thompson Springs CDP	N.A.	N.A.	N.A.	N.A.	39	N.A.	N.A.	N.A.	N.A.
San Juan County	9,700	12,400	12,448	14,413	14,746	2.3%	15,053	15,319	16,653
Aneth CDP	N.A.	N.A.	N.A.	598	501	-16.2%	N.A.	N.A.	N.A.
Blanding City	2,250	3,118	3,162	3,162	3,375	6.7%	3,257	3,314	3,604
Bluff CDP	N.A.	N.A.	N.A.	320	258	-19.4%	N.A.	N.A.	N.A.
Halchita CDP	N.A.	N.A.	N.A.	270	266	-1.5%	N.A.	N.A.	N.A.
Halls Crossing CDP	N.A.	N.A.	N.A.	89	6	-93.3%	N.A.	N.A.	N.A.
La Sal CDP	N.A.	N.A.	N.A.	339	395	16.5%	N.A.	N.A.	N.A.
Mexican Hat CDP	N.A.	N.A.	259	88	31	-64.8%	N.A.	N.A.	N.A.
Montezuma Creek CDP	N.A.	N.A.	N.A.	507	335	-33.9%	N.A.	N.A.	N.A.
Monticello City	1,431	1,929	1,806	1,958	1,972	0.7%	1,975	2,011	2,186
Navajo Mountain CDP	N.A.	N.A.	N.A.	379	354	-6.6%	N.A.	N.A.	N.A.
Olajto-Monument Valley CDP	N.A.	N.A.	N.A.	864	674	-22.0%	N.A.	N.A.	N.A.
Spanish Valley CDP	N.A.	N.A.	N.A.	181	491	171.3%	N.A.	N.A.	N.A.
Tselakai Dezza CDP	N.A.	N.A.	N.A.	103	109	5.8%	N.A.	N.A.	N.A.
White Mesa CDP	N.A.	N.A.	N.A.	277	242	-12.6%	N.A.	N.A.	N.A.
Study Area	16,300	20,650	19,039	22,898	23,971	4.7%	24,746	26,326	28,480

N.A.: Not available.
*Historical data source: 1970–2000 from Utah Population Estimates Committee, Total Population by County: 1940–2009 (Utah Population Estimates Committee [UPEC] 2009). 2010 from U.S. Census Bureau, 2010 Census, Table QT-P3.
**Projection source: GOPB, 2008 Baseline Population Projections (Utah GOPB 2008).

The components of population change in the 2000s varied considerably. This is shown in Table 3-2. Note that cumulative deaths from 2000 to 2009 were nearly the same in the two counties (635 and 668 in Grand and San Juan counties, respectively). However, cumulative births for the same period in San Juan County were over twice as many as in Grand County. Grand County had modest net migration from both domestic and international immigrants to the county. San Juan County had substantial *negative* net migration, led by *out-migration* domestically (San Juan County residents moving to other places in the state or U.S.).

Table 3-2. Components of Population Change 2000–2009

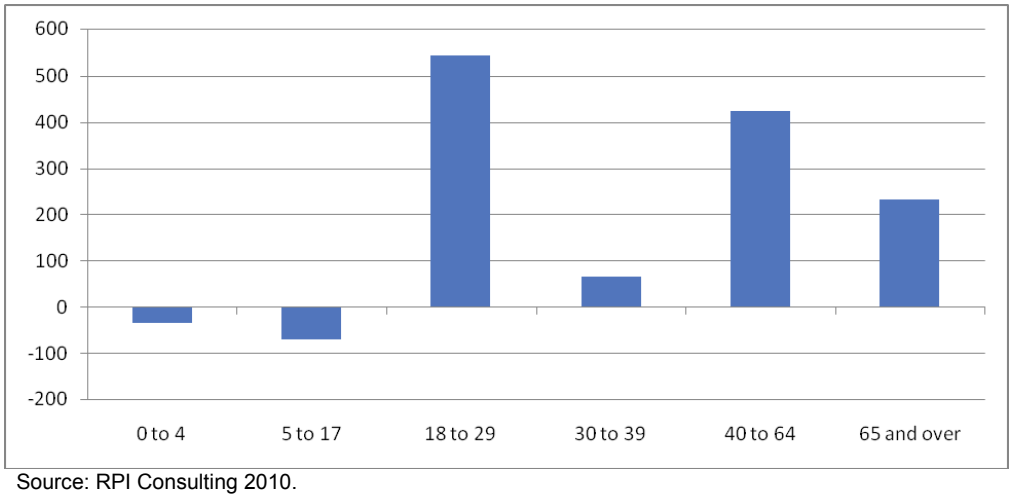
		Grand County	San Juan County	Utah
2000 Population	(1)	8,399	14,373	2,244,314
2009 Population	(2)	9,660	15,049	2,784,572
Population Change 2000–2009	(3)	1,261	676	540,258
Cumulative Births 2000–2009	(4)	1,084	2,269	479,519
Cumulative Deaths 2000–2009	(5)	635	668	124,262
Natural Change	(6)	449	1,601	355,257
Natural Change as Percentage of Population Change	(7)	36%	237%	66%
Domestic Migration	(8)	225	-944	52,582
International Migration	(9)	124	23	65,961
Net Migration	(10)	349	-921	118,543
Net Migration as Percentage of Population Change	(11)	28%	-136%	22%

2000 population estimates are for April 1; 2009 population estimates are for July 1.
(3) = (2) - (1); (6) = (4) - (5); (7) = (6) / (3); (10) = (8) + (9); (11) = (10) / (3)
In determining components of population change, the Census Bureau makes a statistical correction, called a "residual." Because of this correction, natural change plus net migration may not add to total population change in the table, and the percentages of population change may not add to 100. The residual represents change in the population that cannot be attributed to any specific demographic component of population change.
Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on data from the U.S. Census Bureau, Population Division.

This pattern of net in-migration to Grand County and net out-migration from San Juan County probably reflects two factors in particular:

- Grand County appears to be experiencing an influx of new residents attracted by the amenity values of the area and the relatively stronger economy. This is supported by a recent study for the Grand County General Plan update (RPI Consulting 2010) which provided Figure 3-1 below and observed: “two age groups are moving to the area, baby boomers and young adults. Nearly half of new residents moving to Grand County are between the ages of 18 and 29. Only 6% of new residents were in their thirties. This suggests that many of the new residents are young individuals attracted by the outdoor lifestyle and recreation in Grand County and older, financially stable individuals nearing retirement age purchasing retirement and second homes.
- In San Juan County, lower levels of economic opportunity (see the comparative data in Chapter 4) have led to residents leaving the county to find opportunities elsewhere. The high birth rate in San Juan County, coupled with the high out-migration rate, may be indicative of a longer-term trend of young adults leaving the county.

Figure 3-1. Grand County Population Change 2000–2010, by Age Groups



Source: RPI Consulting 2010.

3.3 DEMOGRAPHICS

Key demographic indicators for the socioeconomic study area are presented below. The discussion here focuses on county-level data. The environmental justice (EJ) section below addresses some variations in race and poverty at the sub-county level.

Table 3-3 provides a breakdown of population by race for the socioeconomic study area counties, state, and nation. This data shows marked differences in the race and minority status of the populations of the two counties.

The Grand County population is predominantly White—89 percent of the population classified themselves as White in the 2010 Census. The proportion of all minorities (i.e., all persons except non-Hispanic Whites) in Grand County was 15.9 percent as of the 2010 Census.[1] This is a smaller percentage of minorities than for the state as a whole, and much smaller than for the nation.

In San Juan County, the percentage of Whites is much lower—45.8 percent. Minorities make up 56.1 percent of the county's population. This is a much higher minority population than that of the state or the nation. Over 50 percent of the San Juan County population is of American Indian or Alaska Native race. Most of this population consists of members of the Navajo Nation.

Table 3-4 presents selected additional demographic characteristics for the socioeconomic study area counties compared to the state and nation. The male to female ratio shown in this table is similar for the two counties and the state; together these three geographies have a slightly higher percentage of males than does the nation.

The median age in Grand County, 40.5 years, is considerably greater than in San Juan County, 30.0 years. This reflects the somewhat higher population over 65 in Grand County (13.2 percent) compared to San

[1] *As in most parts of the U.S., a portion of the individuals who classified themselves as White also classified themselves as Hispanic. Hispanic is not a race category but it is a minority population. Some Hispanics classify themselves as White, and some classify themselves as a race other than White. Thus, Hispanic Whites are subtracted from Whites, and the result is subtracted from the total population. The remainder is "All Minorities," which is composed of all persons except non-Hispanic Whites.*

Juan County (10.8 percent), and reflects other parts of the age profile as well. Examination of 5-year age cohort data (U.S. Census Bureau, 2010 Census, Table DP-1) shows that every age cohort in Grand County including and older than the 25–29 year cohort has a higher percentage of the total population than the same cohorts in San Juan County. Conversely, every cohort including and younger than the 20–24 year cohort has a lower percentage in Grand County than San Juan County. Ages newborn to 24 make up 30.0 percent of the total population in Grand County and 44.1 percent in San Juan County. This likely reflects two factors. One is a tendency toward larger families in the American Indian population of San Juan County, and therefore proportionally more individuals in the younger age cohorts. The average family size across San Juan County is 3.77 persons, compared to 2.92 persons in Grand County. A second factor is the out-migration occurring from San Juan County as shown in Table 3-2 above. It is likely that many of the out-migrants are working age persons.

Table 3-4 shows that a very high proportion (compared to Utah and the nation) of the population of San Juan County speaks a language other than English at home. This reflects the substantial Native American (primarily Navajo) population of the county. This figure for Grand County is somewhat lower than the state figure.

As to education levels, both Grand and San Juan counties have somewhat lower percentages of the population 25 and older holding high school diplomas, compared to the state and nation. The percentage of those holding Bachelor's degrees or higher is substantially lower in San Juan County than the state or nation, and somewhat lower in Grand County than the state or nation.

Average income levels in the socioeconomic study area are lower than those of the state or nation, as shown in Table 3-5. According to ACS data, the median family income in Grand County is over $10,000 lower than that of Utah, and the median family income in San Juan County is nearly $20,000 lower than that of Utah. Factors contributing to these differences include the rural nature of the study area, lower education levels, the younger population profile of San Juan County, high minority and reservation populations in San Juan County, and perhaps other factors. The table also shows per capita income. While the median family income figures are from the ACS, the per capita income figures shown here are from the BEA. Because of the different datasets, which use different sampling methods and include different components of income, the per capita income figures have somewhat different relationships. As with the median family income figures, the San Juan County per capita income figure is substantially lower than the statewide figure. However, the Grand County per capita income is higher than the state per capita income. This probably reflects the influx of non-labor income to Grand County from well-off individuals who have retired to or moved to the area. These differences also reflect in part the difficulties in measuring per capita income, especially in small populations. The BEA data has some flaws. It is designed to measure payments to factors of production, not the money income of households (Hoffman, and Rex 2010). However, it is used by the State of Utah, including in the county tables in the annual economic report to the governor.

Table 3-5 also shows county-wide poverty levels. The percentage of individuals in poverty in Grand County is similar to that for Utah and the nation. The percentage of individuals in poverty in San Juan County is much higher, which reflects the factors just mentioned, particularly the effect of historically lower levels of economic opportunity on the Navajo Nation reservation. Poverty is often endemic on Indian reservations. It is also important to note that the average family size, as shown in Table 3-4, is much higher in San Juan County than in Grand County. Thus, not only is the median family income lower in Grand County, but the income available to support each family member is substantially lower.

Table 3-3. Race and Minority Status, 2010

Geographic Area	Race							Hispanic	All Minorities
	White	Black/African American	American Indian/ Alaska	Asian	Native Hawaiian/ Pacific Islander	Some Other Race	Two or More Races		
Grand County	89.0%	0.3%	4.1%	0.8%	0.0%	3.7%	2.0%	9.6%	15.9%
San Juan County	45.8%	0.2%	50.4%	0.3%	0.0%	1.0%	2.3%	4.4%	56.1%
Utah	86.1%	1.1%	1.2%	2.0%	0.9%	6.0%	2.7%	13.0%	19.6%
United States	72.4%	12.6%	0.9%	4.8%	0.2%	6.2%	2.9%	16.3%	36.3%

Hispanic population is an additional designation, not a race designation; the Hispanic population includes multiple races.
"All Minorities" is defined as all persons other than Non-Hispanic White.
CDP: Census-Designated Place
Source: Population, Race, Hispanic—U.S. Census Bureau, 2010 Census, Summary File 1, Table QT-P3. All Minorities—U.S. Census Bureau, 2010 Census, Table QT-P6.

Table 3-4. Demographics Overview of Socioeconomic Study Area Compared to the State and Nation

	Sex		Age (years)		Avg. Family Size	Education (Degrees) of Population 25 Years and Older		Language Other than English*
	Male	Female	Median	Over 65		High School	Bachelors or Higher	
Grand County	50.1%	49.4%	40.5	13.2%	2.92	83.9%	24.3%	11.3%
San Juan County	50.4%	49.6%	30.0	10.8%	3.77	81.8%	17.2%	46.5%
Utah	50.2%	49.8%	28.8	8.9%	3.56	90.6%	29.4%	14.2%
United States	49.1%	50.9%	36.9	12.7%	3.14	85.0%	27.9%	20.1%

*Language other than English spoken at home.
Source: Sex, Age, Avg. Family Size—U.S. Census Bureau, Census 2010, Summary File 1, Tables: QT-P11, QT-P1; Education, Language Other than English—U.S. Census Bureau 2006–2010 ACS, Table DP02.

Table 3-5. Income Levels in the Socioeconomic Study Area, 2006–2010 (2010 $)

Area	Median Family Income (2006–2010)	Per Capita Income (2010)	Individuals Below Poverty Level (%) (2006–2010)
Grand County	$53,291	$33,098	12.6%
San Juan County	$45,653	$21,800	25.8%
Utah	$64,013	$32,817	10.8%
United States	$62,982	$38,846	13.8%

Source: Median family income and individuals below poverty level—U.S. Census Bureau, 2006–2010 ACS, Table DP03. Per capita income—U.S. Department of Commerce, Bureau of Economic Analysis, Table CA1-3; http://www.bea.gov/iTable/iTable.cfm?ReqID=70&step=1&isuri=1&acrdn=5, accessed December 2012.

3.4 HOUSING

Table 3-6 presents a breakdown of different types of housing units in the two counties, and in the state and nation for comparison, from the 2006–2010 ACS. Grand County has a significantly higher rate of multi-unit structures (2 units in the structure and 3 or more units in the structure) than San Juan County. Grand County has a slightly lower percentage of mobile homes than San Juan County. Higher percentages of multi-unit structures are typically indicative of an economy that has greater need for rental units due to high home prices relative to local wages, higher rates of transient or seasonal workers, or both. Both counties have lower rates of multi-unit structures and higher rates of mobile homes than the state or nation.

Table 3-6. Housing Unit Types

Type of Structure	Grand County		San Juan County		Utah	United States
	Number*	%	Number*	%	%	%
1 Unit, Detached	2,903	61.5%	3,984	70.0%	68.9%	61.6%
1 Unit, Attached	114	2.4%	43	0.8%	5.6%	5.7%
2 Units in Structure	216	4.6%	105	1.8%	3.2%	3.9%
3 or More Units	505	10.7%	217	3.8%	18.2%	22.0%
Mobile Home	979	20.7%	1,347	23.6%	4.1%	6.7%
Boat, RV, Van, etc.	6	0.1%	0	0.0%	0.1%	0.1%
Total Units	4,723	100%	5,696	100%	100%	100%

*Numbers of units by type of structure.
Source: U.S. Census Bureau, 2006–2010 ACS, Table B25024.

Table 3-7 presents a snapshot of key housing indicators from the 2010 Census. It shows that Grand County had a total of 4,816 housing units as of April 2010. Of the total units, 12.4 percent were vacant *and* for seasonal or recreational use. The overall vacancy rate was 19.2 percent. The vacant and recreational or seasonal use figure was over 2.5 times the statewide average. The corresponding figure in San Juan County was not quite as high (10.6 percent), and the total number of units in this category was only slightly higher than in Grand County (608 compared to 596 units) even though San Juan County had approximately 900 more units in total than Grand County and its overall vacancy rate was slightly higher, at 21.4 percent.

The two counties had similar percentages of occupied housing units—80.8 percent in Grand County and 78.6 percent in San Juan County. These percentages were less than that for the state (89.6 percent); in other words, the two counties had significantly higher vacancy rates than did the state. Of the occupied units, Grand County had a higher percentage of renter-occupied units (32.8 percent) than San Juan County (19.8 percent), which fits with the observation above on the higher percentage of units in multi-unit structures in Grand County. The percentage of renter-occupied units in Grand County was similar to that for the state (29.6 percent).

The average household sizes for both owner-occupied and renter-occupied units in Grand County were considerably lower than the corresponding figures for San Juan County and the state. Low household sizes are typical of areas where the population of adults is skewed toward younger (pre-child-raising) and older (post-child-raising) cohorts. This pattern is often found in communities where younger, "footloose" individuals and older, affluent people are drawn by quality of life considerations. Figure 3-1 in Section 3.2 above shows that these age cohorts constituted disproportionate shares of persons moving into Grand County in the 2000s.

Table 3-7. Housing Data, 2010

	Grand County		San Juan County		Utah	
	No.	% of Total	No.	% of Total	No.	% of Total
All Units – Occupancy Status						
Total Housing Units	4,816	100%	5,734	100%	979,709	100%
Occupied Housing Units	3,889	80.8%	4,505	78.6%	877,692	89.6%
Vacant Housing Units	927	19.2%	1,229	21.4%	102.017	10.4%
Vacant Units for Seasonal, Recreational, or Occasional Use	596	12.4%	608	10.6%	47,978	4.9%
Homeowner Vacancy Rate (%)	2.0%		1.4%		2.3%	
Rental Vacancy Rate (%)	13.4%		9.2%		7.2%	
Occupied Units						
Total Occupied Housing Units	3,889	100%	4,505	100%	877,692	100%
Owner-occupied Housing Units	2,613	67.2%	3,613	80.2%	618,137	70.4%
Renter-occupied Housing Units	1,276	32.8%	892	19.8%	259,555	29.6%
Average Household Size - Owner Occupied	2.35		3.26		3.21	
Average Household Size - Renter Occupied	2.30		3.01		2.82	

Source: U.S. Census Bureau, 2010 Census, Table DP-1.

3.5 PUBLIC SERVICES

Local governments in the socioeconomic study area maintain critical public infrastructure such as roads and provide a wide range of public services that benefit residents, visitors, and businesses. Table 3-8 and Table 3-9 show the various departments of the two county governments as of February 2012. The employee counts for Grand County are probably close to the actual counts. For San Juan County, the counts are not correct; for instance, only one person is listed in the source document (a phone directory)

for several departments that probably have more employees (e.g., Fire, emergency medical services). However, in both cases these tables do show the range of functions and services of the counties.

Table 3-8. Grand County Government Departments

Department	Number of Staff
Airport	7
Ambulance	36
Assessor	4
Attorney/Grant	5
Building Inspector	3
Child Justice Center	1
Clerk/Auditor	6
County Administrator	3
County Council	7
Courthouse	7
Family Support Center	5
Human Resources	1
Jail	18
Justice Court	4
Library	17
Moab Promotion	6
Planning and Zoning	3
Recorder	3
Roads - Class B	18
Sand Flats Recreation	6
Search and Rescue	16
Senior Citizens	8
Sheriff	16
Spanish Trail Arena	3
Treasurer	2
Weed Control	3

Source: Robertson (2012).

Table 3-9. San Juan County Government Departments

Department	Number of Staff
Aging	4
Assessor	5
Attorney	2

Department	Number of Staff
Building	1
Clerk	3
Commission	5
Communications	1
Community Development	3
Emergency Medical Services (EMS)	1
Fire	1
Information Technology Services (ITS)	3
Justice Court	3
Library	2
Maintenance	1
Personnel	2
Planning	1
Recorder	5
Roads	7
Sheriff	26
Surveyor	3
Tourism	1
Treasurer	2

Source: San Juan County online phone directory at http://www.sanjuancounty.org/dir_dept.htm; accessed August 2012, 2012

Other local governments in the study area provide infrastructure and services in addition to those provided by the counties. These governments include the cities of Moab, Blanding, and Monticello, and a number of districts and special service districts for schools, fire protection, recreation, transportation, health care, mental health, cemetery maintenance, water, sewer, housing, mosquito abatement, solid waste, and general services. Complete lists of all local government entities, and their 2010 revenues, are provided in Table 4-12 and Table 4-13 in Section 4.6.3.

Public infrastructure and services that could potentially be impacted by BLM management decisions include roads, water and wastewater infrastructure, landfills, law enforcement, fire and emergency response, schools, and healthcare facilities and services. Impacts on public services may occur in a variety of ways. They may be direct, such as wear and tear on roads due to increased heavy truck traffic with resource development, or indirect, such increased demand on schools or healthcare facilities if resource development leads to significant population increases. (See also Section 4.7.1.)

3.6 SOCIAL ORGANIZATION AND INSTITUTIONS

Various government entities, institutions, social organizations, and interest groups are stakeholders to the management processes and decisions associated with the development and implementation of the MLP.

The social organizations and institutions identified in the initial phases of the BLM MLP planning process are listed in the sections below according to the following two categories: government; and firms, occupational and interest groups.

3.6.1 Government

The list below includes the government entities that BLM initially invited to participate in the scoping process, and any additional government entities that provided comments as part of the scoping process. The agencies that have formalized an official cooperating agency status with BLM are noted.

Federal Government

The following federal government entities were identified as stakeholders.

Cooperating Agencies

- The National Park Service (DOI)

Other Agencies

- Arches National Park
- Canyonlands National Park
- U.S. Environmental Protection Agency, Region 8
- U.S. Fish and Wildlife Service (USFWS), Utah Field Office

Tribal Government

The following tribal government entities were identified as stakeholders.

Cooperating Agencies

No tribal governments have formalized an official cooperating agency status with BLM as of the writing of this report.

Other Agencies

- Hopi Indian Tribe
- Navajo Nation
- Paiute Indian Tribe of Utah
- Pueblo of Acoma
- Pueblo of Jemez
- Pueblo of Laguna
- Pueblo of Santa Clara
- Pueblo of Zia
- Pueblo of Zuni
- Southern Ute Tribe
- Uintah and Ouray Reservation
- Ute Mountain Ute Tribe
- White Mesa Ute Tribe

State Government

The following state government entities were identified as stakeholders.

Cooperating Agencies

- State of Utah

Other Agencies

- Utah Public Lands Policy Coordinating Office
- Utah School and Institutional Trust Lands Administration (SITLA)

Local Government

The following local government entities were identified as stakeholders.

Cooperating Agencies

- Grand County
- San Juan County

Other Agencies

- Town of Castle Valley

Special Districts and Commissions

The following special districts and commissions were identified as stakeholders.

Cooperating Agencies

No special districts or commissions have formalized an official cooperating agency status with BLM as of the writing of this report.

Other Agencies

- Southeastern Utah Association of Local Governments/Southeastern Utah Economic Development District (SEUALG/SEUEDD)

3.6.2 Firms, Occupational and Interest Groups

The firms and occupational and interest groups listed below participated in the scoping meetings and/or provided written comments as part of the scoping process for this MLP. This category includes individual companies, business associations, and nonprofit organizations.

- American Innovative Minerals LLC
- Back Country Horsemen of Utah
- Bjork Lindley Little, P.C.
- Boldt Construction
- Canyonlands Back Country Horsemen of Utah
- Canyonlands Field Institute
- Canyonlands Watershed Council
- Center for Neuroscience
- Chile Pepper Bike Shop
- Continental Metallurgical Services

- Dakota Salts, LLC
- Daub and Associates, Inc.
- Del Fortner Consulting
- Dig Media
- Digs Utah LLC
- DJ Simmons, Inc.
- Ellsworth Handcrafted Bicycles, Inc.
- Escape Adventures
- Fidelity Exploration and Production Company
- Friends of Indian Creek
- Landmark Resources, LLC
- Magna Resources Ltd.
- Mesa Exploration Corp.
- Moab Trails Alliance
- National Parks Conservation Association
- National Trails Intermountain Region
- Northwestern University Environmental Policy and Culture Program
- Pinnacle Potash International, Ltd.
- Potash Conglomerate Group
- Rim Tours, Inc.
- Rocky Mountain Outward Bound School
- Seattle Fish Company
- Sierra Club
- Southern Utah Wilderness Alliance
- Stoel Rives, LLP
- Synergy Operating, LLC
- The Nature Conservancy
- Utah Environmental Congress
- Utah Rock Art Research Association
- Western Energy Alliance
- Western Spirit Cycling

3.7 SOCIAL VALUES, ATTITUDES, AND BELIEFS

Section 3.6 identified many organizations that are stakeholders to the use and management of BLM public lands. These stakeholder organizations and individuals have widely varying interests in the use and management of these resources. Different types of stakeholders have distinct sets of attitudes, beliefs, values, opinions, and perceptions about public resources and the effects of various management policies and actions. These views reflect different cultural as well as economic linkages people have to public lands.

The social impact analysis that will be conducted later in the planning process will use categories of stakeholders as one means of identifying impacts of the management actions under each alternative. By looking at the management actions from the different points of view of the various stakeholder groups, potential social and cultural impacts on each group can be identified.

Broad categories of stakeholders affected by the decisions to be made in this planning action are identified and characterized below. These categories and their descriptions are based primarily on comments made during the public scoping period. Of note, stakeholders to livestock grazing, OHV use,

and renewable energy development are often prominent in BLM planning actions, but very few comments on these topics were made during the scoping period, either supporting or objecting to these uses.

The categorization of stakeholders is not meant to imply that all individuals and social groups fit neatly into a single category; many specific individuals or organizations may have multiple interests and would see themselves reflected in more than one stakeholder category. The point of categorization is to facilitate the impacts analysis phase of the planning process by allowing differentiation of social impacts based on broad differences in socio-cultural linkages to public lands and peoples' associated points of view.

3.7.1 Habitat and Resource Conservation Stakeholders

These stakeholders have a number of conservation objectives, but most believe broadly that protecting at-risk species and maintaining habitats and ecosystems for all species is a fundamental value and should be a high priority in public policy. Most believe in the intrinsic value of wildlife, well-functioning ecosystems, and pristine areas. Some advocate resource conservation for human as well as wildlife needs, pointing to the beauty and solitude values of unspoiled areas in the planning area.

These stakeholders see a number of threats to species and habitat protection and resource conservation generally. A major concern for them is oil, gas, and mineral development due to impacts from associated roads, drilling pads, pipelines, etc. Comments received during the scoping period addressed the current conditions of fish and wildlife habitat and threats to the health of the habitat, such as fragmentation from mineral development. Commenters stressed that management should address the compatibility of oil, gas, and potash development with maintaining or improving fish and wildlife populations and habitat.

Additional resource conservation topics that are of interest to members of this stakeholder category include water, air, and soil resources; and vegetation and riparian zone management. In the scoping period, many comments addressed the availability, use, and quality of water supplies. Commenters pointed out the importance of water resources in the region and questioned if potash development was a viable development option due to limited water supplies. Others were concerned with erosion caused by surface disturbing activities associated with oil, gas, and potash development. Introduction of invasive plants such as noxious weeds was also a concern, and some comments addressed specific techniques for soil and vegetation management, including reclamation practices.

Persons and organizations concerned with protection of paleontological, cultural, and historic sites also generally fit into this category of resource conservation stakeholders. Comments regarding cultural and paleontological resources primarily emphasized their social importance and stressed that mitigation measures be implemented to protect potential sites that have yet to be discovered. Some noted particularly that any segments of the Old Spanish Trail located in the planning area should be mapped and that management prescriptions should be applied to ensure that the trail is protected.

While mineral development is the primary concern of this stakeholder category, other sources of impacts on habitat and other conservation values are concerns to some in this category. For instance, one scoping comment stated, "Recreation is becoming a serious impact that could measure up to extractive industries if not checked. This applies particularly to the use of old mining routes for OHV activity, but extends to nonmotorized recreation as well."

Based on their values and various concerns, these stakeholders favor designation of new protected areas and strong restrictions and stipulations on resource development. They advocate development of specific management actions (prescriptions, restrictions, and/or mitigations) to meet desired conditions for priority species and habitats, to support other species, and to protect the ecosystem and other resources (e.g., water, cultural, and scenic resources).

3.7.2 Recreation Stakeholders

There are many types of recreational activities in the planning area. The primary concern of most recreation stakeholders is potential degradation and loss of recreational use values from mineral resource development. These stakeholders typically view resource development as having permanent impacts on recreation values. They seek protection of areas with high recreation values so that future generations can enjoy these values. Many public scoping respondents identified areas and trails of recreational interest located within the MLP that they believed should be protected from mineral development.

For many recreationists, maintaining recreation values and habitat or ecosystem values go hand-in-hand; they say that healthy ecosystems support positive recreation experiences. For many recreation stakeholders, the preservation of natural soundscapes is also important, in order to provide users with adequate opportunities for quiet recreation. They see resource development and new roads as antithetical to this objective.

Recreation stakeholders believe that the region relies on tourism and recreation as its primary economic driving force. They point out how expenditures by mountain bikers, rafters, hunters, fishermen, OHV riders, and other recreationists help support local businesses, provide local jobs and income, and generate sales taxes and other public revenues. They maintain that the recreation and tourism industry has proven to be a stable and an increasing economic engine for the area, and often compare this to local historic experience with and future potential for downturns in the mining industry. One scoping response stated, "Extractive industries provide short-term benefits and long-term impacts to the watershed, whereas the tourism industry has a lower impact on natural resources and may have the capacity to avoid the boom and-bust cycles that plague mining activity."

3.7.3 Mineral Development and Production Stakeholders

These stakeholders believe mineral development is a vital component of the national, state, and local economies—creating jobs, generating income, and contributing tax and royalty payments to all levels of government. Throughout the West, many of these stakeholders also believe mineral development and production is socially important because it has been part of the social fabric of some communities for years, and because it supports the social systems of local communities by providing private sector livelihoods and revenues to government.

One comment from the scoping period was that "the local and national value of the MLP area cannot be overstated; its mineral resources are unique and constitute vital resources to our Nation." Other comments included that potash resources would help supply domestic agricultural markets, and that the country is too dependent on foreign potash suppliers. With respect to oil and gas production, these stakeholders believe that domestic development and production is important to national energy security.

These stakeholders urged that BLM consider the socioeconomic benefits from oil, gas, and potash leasing and development and consider the economic losses if this type of development does not occur. Some also compared the economics of mineral development and production with the economics of recreation and tourism. For instance, one commenter stated, "The jobs associated with the tourist economy are highly cyclical, seasonal, low paying, transient, and seldom long-term. Although tourism is a critical industry to the overall state, local benefits are not as positive as generally promised. Jobs associated with potash development are higher paying, long-term, stable jobs that can support careers, families and stability in the region."

Mineral development stakeholders are concerned that MLP decisions involving restrictions and stipulations on mineral development could have adverse impacts on the industry in the planning area and

on the local economies. Many are concerned about limitations that would reduce future development or increase the costs of development; some are concerned that restrictions could abrogate operators' valid existing rights. A specific concern from the scoping period is the ability for SITLA and private entities to utilize their mineral rights. Comments stated that because most of the SITLA and private lands in the planning area are small scattered single parcels, if BLM does not recognize mineral rights on these lands and if it creates broad-scope restrictions, the mineral rights of these lands cannot be developed.

These stakeholders urge BLM to recognize the ability of the industry to responsibly develop mineral resources and protect critical landscapes, habitat, and species. They believe that many years of compatible development have been achieved in the area, providing significant benefits to the local and regional economy. The Cane Creek mine operated by Intrepid was cited as a specific example in the scoping comments.

3.7.4 Visual Resource Stakeholders

These stakeholders focus on the scenic qualities of the area. While they share many of the perspectives of Habitat and Resource Conservation stakeholders and Recreation Stakeholders, they emphasize the role of visual resources as the fundamental asset underlying both direct recreational use of public lands and general tourism to the region. They believe the scenic quality of the landscape in and around the planning area is world renowned and that national parks and other federally and state managed lands are a huge economic draw to southern Utah and the area in and around the MLP planning area because of their scenic qualities.

Based on this view of visual resources as a unique and valuable asset, these stakeholders emphasize that the visual integrity of the area needs to be maintained. One scoping comment stated that "San Juan and Grand counties have worked long and hard since the uranium 'bust' of the 1980s to reframe our image and brand as a place of vast, relatively pristine beauty and outdoor adventure." These stakeholders are concerned that oil, gas, and potash development could degrade the scenic resources that draw so many visitors to the area. Some comments suggested that national parks should be expanded or that at the very least a buffer area should be placed around existing national parks to protect viewsheds.

Many of these stakeholders are also concerned with preservation of soundscapes with minimal unnatural noises, and preservation of dark night skies free of light pollution. Some note the aesthetic role that vegetation has on the landscape, and the potential for disruption of natural vegetative cover from resource development. In addition, some of these stakeholders note the potential for deterioration of air quality caused by airborne pollutants and fugitive dust from resource development, and highlight the importance of protecting the surrounding Class 1 airsheds of the neighboring national parks.

3.8 ENVIRONMENTAL JUSTICE (EJ)

The concept of EJ first became a required consideration for federal agencies with the publication of EO 12898 on February 11, 1994. The EO requires each federal agency to "make achieving EJ part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations" (EO 12898, §59 *Federal Register* 7629, 1994).

Fundamental principles of EJ require that federal agencies:

- Avoid, minimize or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- Ensure the full and fair participation by all potentially affected communities in the decision-making process;
- Prevent the denial of, reduction in or significant delay in the receipt of benefits of the project by minority and low-income populations.

Evaluation of EJ impacts requires identification of minority and low-income populations (including Native American tribes) within the affected area and evaluation of the potential for the alternatives to have disproportionately high and adverse impacts on such populations.

This Socioeconomic Baseline Report provides the first step in the EJ analysis—a screening analysis of the socioeconomic study area for the planning action to identify the presence and location of any "EJ populations." Evaluation of potential adverse impacts on these populations will take place during the impacts analysis phase of the planning process.

The next section discusses the technical definitions used in identifying EJ populations, and the definition of "disproportionately high and adverse" effects. The concluding section presents the results of the screening analysis.

3.8.1 Definitions

Subsequent to publication of the EO, the Council on Environmental Quality (CEQ), part of the Executive Office of the President, issued guidance for considering EJ within the NEPA process (CEQ 1997). This guidance defines minorities as individuals who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. The guidance further defines a "minority population" as follows:

> *Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.*

The guidance also makes clear that Indian tribes in the affected area should also be considered in the EJ analysis.

The CEQ guidance states that "low-income" should be determined using the annual statistical poverty thresholds from the Bureau of the Census. That is, persons living under the poverty income threshold are potentially of concern. The guidance does not specify how to identify a "low-income population," but in practice the same approach used for minority populations can be followed—where persons in poverty status are greater than 50 percent of the area's total population, or where the percentage in poverty is meaningfully greater than the percentage in the general population or an appropriate comparison area (the reference population).

The CEQ guidance does not define what constitutes "meaningfully greater." In practice, meaningfully greater is often defined to identify an EJ population if the percentage of population in minority and/or poverty status in an area is at least ten percentage points higher than in the comparison area (e.g., greater than or equal to 19 percent Hispanic in a study area geography compared to 9 percent Hispanic in the

comparison area). This threshold is based on experience evaluating EJ indicators and the sense that this threshold represents a significant difference between the affected and reference populations.

As to "disproportionately high and adverse" effects, the CEQ guidance states:

> *Disproportionately high and adverse human health effects: When determining whether human health effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable:*
>
> > *(a) Whether the health effects, which may be measured in risks and rates, are significant (as employed by NEPA), or above generally accepted norms. Adverse health effects may include bodily impairment, infirmity, illness, or death; and*
> >
> > *(b) Whether the risk or rate of hazard exposure by a minority population, low-income population, or Indian tribe to an environmental hazard is significant (as employed by NEPA) and appreciably exceeds or is likely to appreciably exceed the risk or rate to the general population or other appropriate comparison group; and*
> >
> > *(c) Whether health effects occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.*
>
> *Disproportionately high and adverse environmental effects: When determining whether environmental effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable:*
>
> > *(a) Whether there is or will be an impact on the natural or physical environment that significantly (as employed by NEPA) and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment; and*
> >
> > *(b) Whether environmental effects are significant (as employed by NEPA) and are or may be having an adverse impact on minority populations, low income populations, or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and*
> >
> > *(c) Whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards. (CEQ 1997)*

The guidance and the presidential memo that accompanied the EO emphasize that agencies should provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities.

3.8.2 Screening Analysis

Identification of potential EJ populations requires data on population make-up (numbers of persons by race), data on poverty (numbers of persons living under the poverty level), and identification of any special Indian tribe areas, such as reservations. The data must be sufficiently disaggregated to show any significant variations across the study area in concentrations of minority populations or populations living in poverty.

The most recent data that is broken-down to the sub-county level in the socioeconomic study area is from the 2010 Census for minority populations and from the Census Bureau's 2006–2010 ACS for poverty. Both sources provide data for cities, towns, and CDPs, which are notable population concentrations in unincorporated areas. This "place" level of geography is appropriate for a BLM Field Office planning-level action, as it provides a reasonably disaggregated view of population variations across a large study area. Subsequent to the RMP/EIS, for implementation-level actions that consider highly localized activities, additional EJ analysis at an even finer geographic level may be warranted.

Table 3-10 shows data for race and Hispanic identification for study area cities, towns, and CDPs. Table 3-11 shows data on population below the poverty level. These tables also show the corresponding data for two reference populations: the state of Wyoming and the United States.

In both tables, the data for each minority or poverty group is expressed as a percentage of the total population. For this screening analysis, the convention noted above has been adopted: if the minority population or population in poverty is 10 percentage points or more greater than for one of the reference populations (i.e., the lower percentage figure for either the state or the U.S.), the area is "flagged" as being a potential EJ population and therefore an area of *potential* concern from an EJ perspective.

The adjective *potential* is emphasized here. No determination is made here as to the likelihood of disproportionately high and adverse effects on these populations. That can only be determined once the management alternatives are defined and the impact analyses are performed.

Based on the available data and the definitions and threshold values noted above, the following places are flagged for further EJ consideration in the impacts analysis process:

Grand County

- No areas are flagged. None of the identified geographies meets the thresholds to qualify as a potential EJ population.

San Juan County

- Aneth CDP for American Indian minority population and population in poverty
- Blanding City for American Indian minority population and population in poverty
- Bluff CDP for American Indian minority population and population in poverty
- Halchita CDP for American Indian minority population and population in poverty
- Montezuma Creek CDP for American Indian minority population and population in poverty
- Navajo Mountain CDP for American Indian minority population and population in poverty
- Oljato-Monument Valley CDP for American Indian minority population and population in poverty
- Tselakai Dezza CDP for American Indian minority population
- White Mesa CDP for American Indian minority population and population in poverty
- In addition, the Navajo Nation is flagged due to its status as an Indian reservation.
- The county as a whole has an American Indian minority population that exceeds the threshold value as defined above. The county's percentage of population in poverty also exceeds the defined threshold value. The place-specific data, including the presence of the Navajo Nation, likely provides the relevant analytical focus, but distributed populations can also be considered in EJ impacts analysis.

Note that all of the flagged areas in San Juan County except Blanding, Bluff, and White Mesa are located on the Navajo Nation. None of the potential EJ populations reside within the MLP planning area itself; still, they potentially could be affected by MLP decisions.

Table 3-10. Environmental Justice Indicators, Minority Population, 2010 Census

Geographic Area	Total Population (2010)	Race							Hispanic (%)	All Minorities
		White (%)	Black/ African American (%)	American Indian/ Alaska Native (%)	Asian (%)	Native Hawaiian/ Pacific Islander (%)	Some Other Race (%)	Two or More Races (%)		
United States	**308,745,538**	**72.4**	**12.6**	**0.9**	**4.8**	**0.2**	**6.2**	**2.9**	**16.3**	**36.3**
Utah	**2,763,885**	**86.1**	**1.1**	**1.2**	**2.0**	**0.9**	**6.0**	**2.7**	**13.0**	**19.6**
Grand County	**9,225**	**89.0**	**0.3**	**4.1**	**0.8**	**0.0**	**3.7**	**2.0**	**9.6**	**15.9**
Castle Valley Town	319	97.2	0.0	0.3	0.6	0.0	0.6	1.3	1.9	3.7
Moab City	5,046	85.3	0.4	5.9	0.9	0.1	5.5	1.9	12.8	21.2
Thompson Springs CDP	39	94.9	0.0	0.0	0.0	0.0	0.0	5.1	0.0	5.1
San Juan County	**14,746**	**45.8**	**0.2**	**50.4**	**0.3**	**0.0**	**1.0**	**2.3**	**4.4**	56.1
Aneth CDP	501	1.0	0.0	97.6	0.0	0.0	1.0	0.4	1.6	99.0
Blanding City	3,375	66.1	0.3	29.4	0.3	0.1	0.5	3.3	3.8	35.9
Bluff CDP	258	68.2	0.8	25.6	0.0	0.0	1.6	3.9	5.0	34.1
Halchita CDP	266	0.8	0.0	98.9	0.0	0.0	0.0	0.4	1.1	99.2
Halls Crossing CDP	6	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
La Sal CDP	395	98.2	0.0	0.5	0.0	0.0	1.0	0.3	8.9	9.1
Mexican Hat CDP	31	90.3	0.0	9.7	0.0	0.0	0.0	0.0	0.0	9.7
Montezuma Creek CDP	335	4.2	0.0	94.9	0.0	0.0	0.0	0.9	3.6	95.8
Monticello City	1,972	84.9	0.4	6.4	0.7	0.0	4.6	3.0	13.4	21.6
Navajo Mountain CDP	354	1.4	0.0	95.5	0.0	0.0	0.0	3.1	0.0	98.6
Oljato-Monument Valley CDP	674	4.9	0.0	92.3	0.1	0.0	0.1	2.5	1.5	95.4
Spanish Valley CDP	491	94.1	0.0	2.4	0.2	0.0	0.8	2.4	6.7	9.0
Tselakai Dezza CDP	109	0.0	0.0	98.2	0.0	0.0	0.0	1.8	1.8	100.0
White Mesa CDP	242	3.7	0.0	91.7	0.0	0.0	0.0	4.5	4.1	96.3

Italics indicate places on the Navajo Nation.
Hispanic population is an additional designation, not a race designation; the Hispanic population includes multiple races.
"All Minorities" is defined as all persons other than Non-Hispanic White.
CDP: Census-Designated Place
Yellow Shading: Relevant reference population statistics. Orange Shading: Statistics/places "flagged" for EJ impacts analysis.
Local area populations do not sum to county population (do not cover 100% of the county).
Source: Population, Race, Hispanic—U.S. Census Bureau, 2010 Census, Summary File 1, Table QT-P3. All Minorities—U.S. Census Bureau, 2010 Census, Table QT-P6.

Table 3-11. Environmental Justice Indicators, Poverty, 2006–2010 American Community Survey (ACS)

Geographic Area	Total Population (2010)	Percent Individuals Below Poverty
United States	**308,745,538**	**13.8**
Utah	**2,763,885**	**10.8**
Grand County	**9,225**	**12.6**
Castle Valley Town	319	11.0
Moab City	5,046	16.4
Thompson Springs CDP	39	0.0
San Juan County	**14,746**	**25.8**
Aneth CDP	501	54.2
Blanding City	3,375	23.0
Bluff CDP	258	35.4
Halchita CDP	266	47.1
Halls Crossing CDP	6	N.A.
La Sal CDP	395	0.0
Mexican Hat CDP	31	0.0
Montezuma Creek CDP	335	23.4
Monticello City	1,972	8.8
Navajo Mountain CDP	354	24.1
Oljato-Monument Valley CDP	674	40.6
Spanish Valley CDP	491	0.0
Tselakai Dezza CDP	109	7.5
White Mesa CDP	242	37.7

Italics indicate places on the Navajo Nation.
CDP: Census-Designated Place.
N.A.: Not available.
Yellow Shading: Relevant reference population statistics. Orange Shading: Statistics/places "flagged" for EJ impacts analysis.
Local area populations do not sum to county population (do not cover 100% of the county).
Source: Population—U.S. Census Bureau, 2010 Census, Summary File 1, Table QT-P3. Poverty status—U.S. Census Bureau, 2006–2010 ACS 5-Year Estimates, Table DP03.

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CHAPTER 4—ECONOMIC CONDITIONS

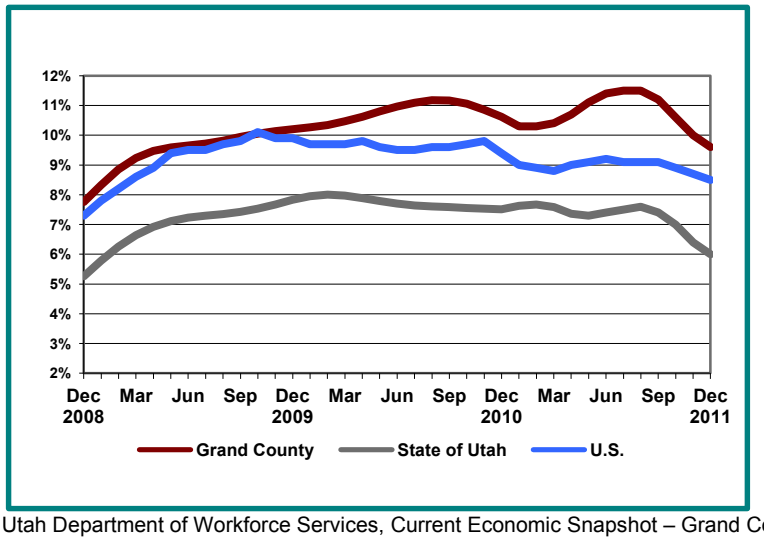
This chapter identifies and profiles the economy of the socioeconomic study area in terms of employment, earnings, numbers and types of businesses, sources of personal income, and economic base. This chapter also includes data on sources of funds for state and local government, and briefly discusses BLM and local government expenditures. Data are provided at the county level. In some cases, data are also provided for the state of Utah and the U.S. for comparative purposes.

4.1 EMPLOYMENT

Figure 4-1 and Figure 4-2 show the unemployment rate in Grand and San Juan counties in recent years. In both counties, unemployment increased significantly from the beginning of the period shown and remained high until the last quarter of 2011, when it began to decline. This pattern mirrors state and national trends, but the unemployment rates in the two counties have been higher.

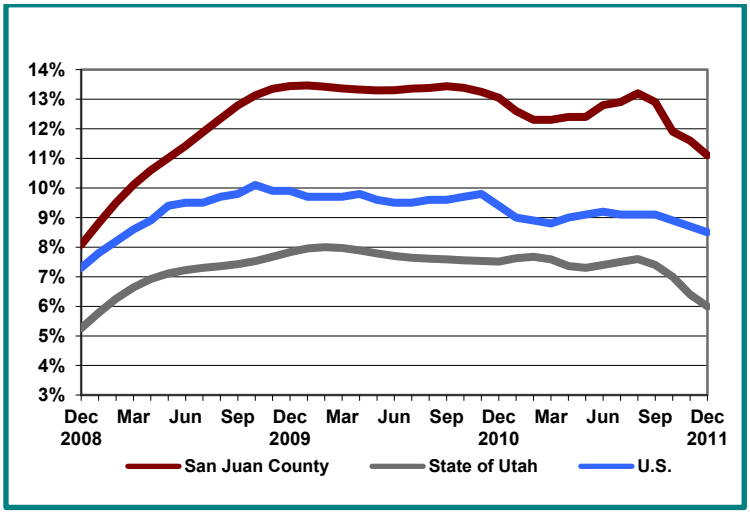
The unemployment rate in Grand County was similar to the national rate from December 2008 through December 2009, and higher at all points thereafter through December 2011. Throughout the period shown, the Grand County rate was approximately 3 to 4 percentage points higher than the rate for the entire state of Utah. In San Juan County, the unemployment rate was higher than the national and state rates throughout the time period, and to a greater degree than in Grand County. The county's rate was approximately 5 to 5.5 points higher than the state's rate for much of the time period.

Figure 4-1. Seasonally Adjusted Unemployment Rates, Grand County



Source: Utah Department of Workforce Services, Current Economic Snapshot – Grand County, February 1, 2012, based on U.S. Bureau of Labor Statistics data.

Figure 4-2. Seasonally Adjusted Unemployment Rates, San Juan County



Source: Utah Department of Workforce Services, Current Economic Snapshot – San Juan County, February 1, 2012, based on U.S. Bureau of Labor Statistics data.

Historical economic data by industry demonstrate the relative importance of different industries to the socioeconomic study area over time. This section and the next focus on jobs and labor earnings by specific industry for recent years.

The tables and figures below provide trends in employment for 2001 to 2009, for each county, by North American Industry Classification System (NAICS) code. This data shows details and differences in employment trends by sector at the local county level.

Note that although BEA estimates annual employment for counties nationwide, BEA does not disclose some information (e.g., total employment for an industry sector that has few companies within a particular geography) to ensure that it does not violate confidentiality for those companies. However, the provider of the BEA data used in this report, Headwater Economics, has a methodology to provide estimates for non-disclosed data. These estimates are incorporated in various tables and figures throughout this report. Also note that the three sector categories—*Services related*, *Non-services related*, and *Government*—are categories created by Headwater Economics. While not official BEA categories, they provide useful high-level groupings of roughly similar industries.

Table 4-1 and Figure 4-3 show that the largest industries in Grand County in 2009 were *Accommodation and Food Services* (1,458 jobs, or 21.8 percent of all jobs), *Government* (14.0 percent), and *Retail Trade* (13.6 percent). From 2001 to 2009, the industries experiencing the greatest numerical growth in jobs were *Real Estate Rental and Leasing* (193 jobs added), *Accommodation and Food Services* (144 jobs added), and *Retail Trade* (133 jobs added). The strength of the *Accommodation and Food Services, Retail Trade,* and *Real Estate Rental and Leasing* industries reflects Grand County's strength as a tourist destination and as a retail/services hub for southeast Utah. The size of the *Government* sector is typical; nationally, the *Government* sector provided 14.2 percent of all jobs. For the 2001 to 2009 period, the Grand County industries experiencing the greatest percentage growth in jobs were *Real Estate Rental and Leasing* (75.7 percent growth in jobs), *Finance and Insurance* (41.2 percent growth), and a near-tie between *Health Care and Social Assistance* (35.9 percent) and *Educational Services* (35.4 percent). These all show the importance of service-sector industries to local economic growth. Of note, the *Mining* industry had the 5th fastest rate of growth, increasing by 22.9 percent (25 jobs added).

The employment picture in San Juan County has both similarities and differences to that of Grand County, as shown in Table 4-2 and Figure 4-4. The largest industries in San Juan County in 2009 were *Government* (1,706 jobs, or 26.8 percent of all jobs), *Farming* (11.2 percent), and *Accommodation and Food Services* (10.8 percent). These industries are all larger than national averages (14.2 percent, 1.5 percent, and 6.9 percent, respectively). For the 2001 to 2009 period, the San Juan County industries experiencing the greatest numerical growth in jobs were *Farming* (435 jobs added), *Health Care and Social Assistance* (116 jobs added), and a near-tie between *Administrative and Waste Services* (109 jobs added) and *Real Estate Rental and Leasing* (108 jobs added). The *Mining* industry had the 5th largest number of jobs added, with 102 new jobs. For the same period, the San Juan County industries experiencing the greatest percentage growth in jobs were *Real Estate Rental and Leasing* (261 percent), *Administrative and Waste Services* (170 percent), and *Farming* (157 percent).

In summary, employment in San Juan County includes a larger role for non-service industries (*Farming* and *Mining*) and greater reliance on *Government* jobs than in Grand County, while also including important roles for tourism related industries such as *Accommodation and Food Services* and *Real Estate Rental and Leasing.*

The importance of the *Government* sector in both counties bears additional discussion. The data in this section does not show a breakdown by federal, state, and local government. However, Table 4-5 and Table 4-6 in the following section do show this breakdown. In both counties, local government is the predominant government employer. In 2010 it employed 64 percent of all government employees in Grand County, and 69 percent in San Juan County. Of the remainder, federal government jobs are more numerous than state jobs in Grand County, and state jobs are more numerous than federal jobs in San Juan County.

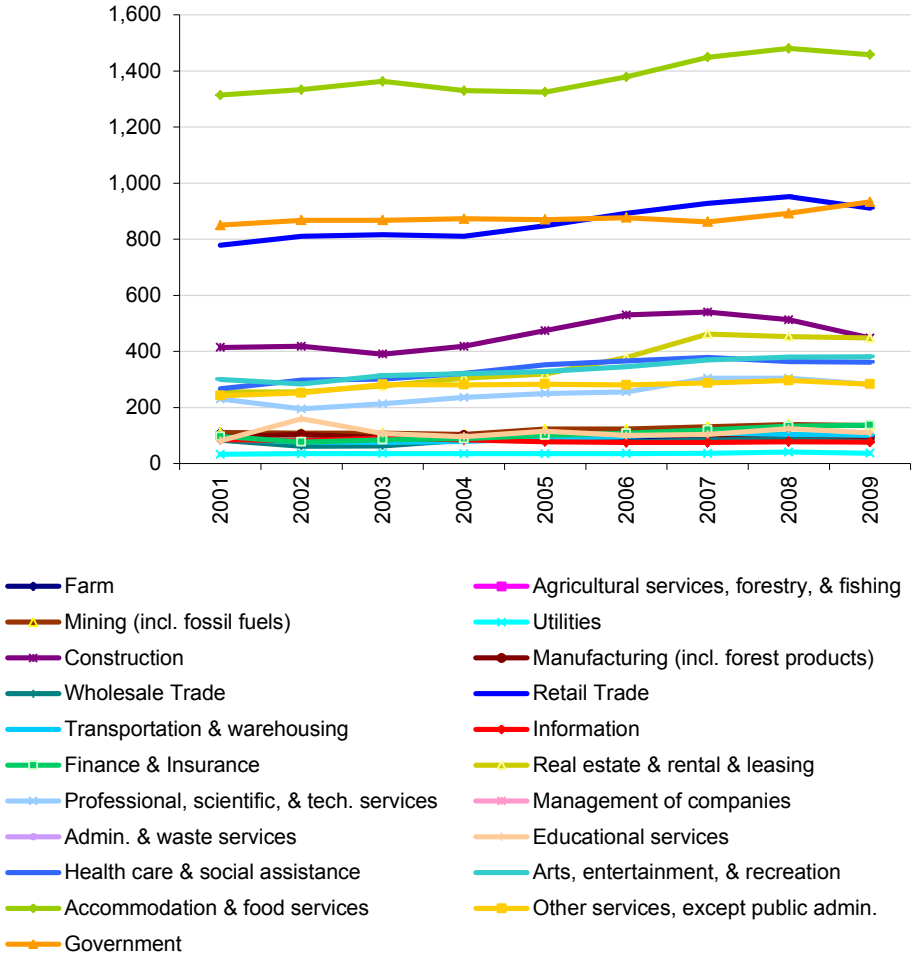
Table 4-1. Grand County Employment by Industry, 2001–2009

	2001	2009	Change 2001–2009
Total Employment (number of jobs)	5,685	6,687	1,002
Non-services related	*731*	*767*	36
Farm	110	97	-13
Forestry, fishing, and related activities	*na*	*na*	na
Mining (including fossil fuels)	*111*	*136*	25
Construction	414	448	34
Manufacturing	96	86	-10
Services related	*3,853*	*4,665*	812
Utilities	33	37	4
Wholesale trade	83	78	-5
Retail trade	778	911	133
Transportation and warehousing	88	101	13
Information	*86*	76	-10
Finance and insurance	97	137	40
Real estate and rental and leasing	255	448	193
Professional and technical services	230	283	53
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*na*	*na*	na
Educational services	*81*	110	29
Health care and social assistance	*266*	362	96

	2001	2009	Change 2001–2009
Arts, entertainment, and recreation	300	381	81
Accommodation and food services	1,314	1,458	144
Other services, except public administration	242	283	41
Government	850	933	83
Percent of Total			**% Change 2001–2009**
Total Employment			17.6%
Non-services related	*12.9%*	*11.5%*	5.0%
Farm	1.9%	1.5%	-11.8%
Forestry, fishing, and related activities	*na*	*na*	na
Mining (including fossil fuels)	*1.9%*	*2.0%*	22.9%
Construction	7.3%	6.7%	8.2%
Manufacturing	1.7%	1.3%	-10.4%
Services related	*67.8%*	*69.8%*	21.1%
Utilities	0.6%	0.6%	12.1%
Wholesale trade	1.5%	1.2%	-6.0%
Retail trade	13.7%	13.6%	17.1%
Transportation and warehousing	1.5%	1.5%	14.8%
Information	*1.5%*	1.1%	-11.3%
Finance and insurance	1.7%	2.0%	41.2%
Real estate and rental and leasing	4.5%	6.7%	75.7%
Professional and technical services	4.0%	4.2%	23.0%
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*na*	*na*	na
Educational services	*1.4%*	1.6%	35.4%
Health care and social assistance	*4.7%*	5.4%	35.9%
Arts, entertainment, and recreation	5.3%	5.7%	27.0%
Accommodation and food services	23.1%	21.8%	11.0%
Other services, except public administration	4.3%	4.2%	16.9%
Government	15.0%	14.0%	9.8%

All employment data are reported by place of work.
na: Not available. Estimates for data that were not disclosed are shown in italics. Actual and estimated data may not add to totals.
Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Table CA25N.

Figure 4-3. Grand County Employment by Industry, 2001–2009



Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Table CA25N.

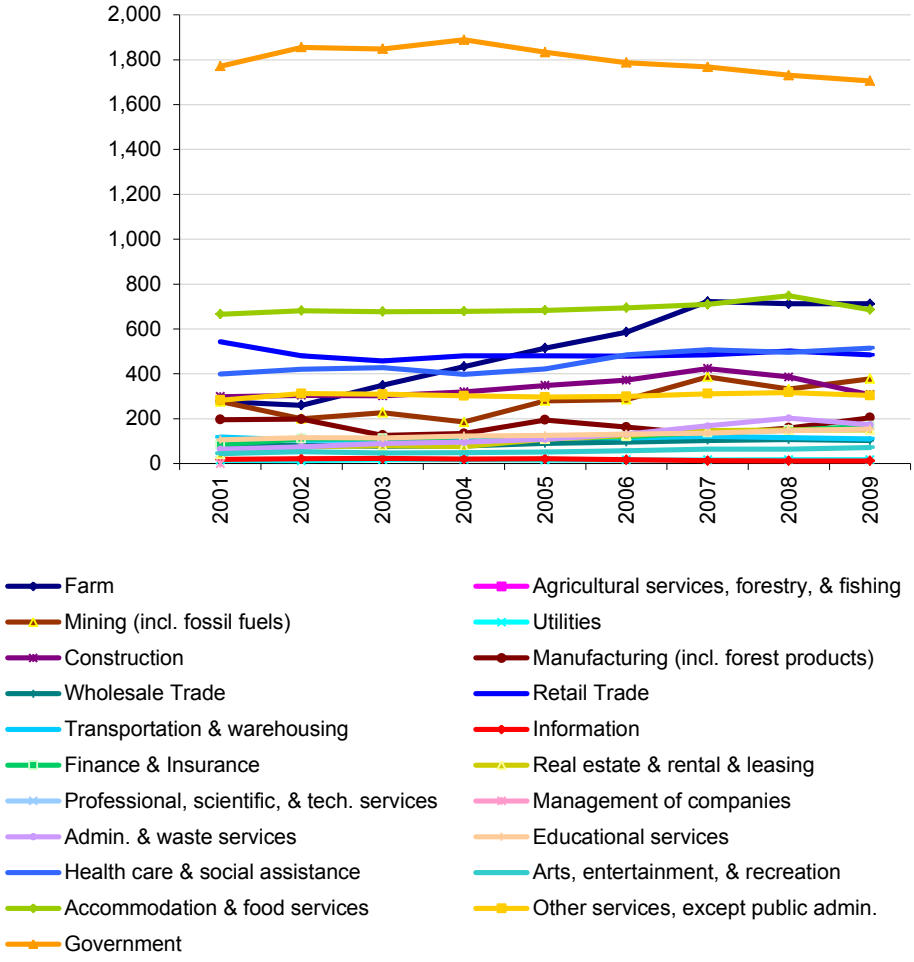
Table 4-2. San Juan County Employment by Industry, 2001–2009

	2001	2009	Change 2001–2009
Total Employment (number of jobs)	5,209	6,376	1,167
Non-services related	*1,047*	*1,601*	554
Farm	277	712	435
Forestry, fishing, and related activities	*na*	*na*	na
Mining (including fossil fuels)	*276*	378	102
Construction	298	307	9
Manufacturing	196	204	8
Services related	*2,468*	*2,945*	477
Utilities	15	*17*	2
Wholesale trade	85	*102*	17
Retail trade	543	484	-59

	2001	2009	Change 2001–2009
Transportation and warehousing	118	110	-8
Information	*19*	12	-7
Finance and insurance	*84*	167	83
Real estate and rental and leasing	*42*	150	108
Professional and technical services	*na*	*na*	na
Management of companies and enterprises	0	*na*	na
Administrative and waste services	64	173	109
Educational services	*106*	*154*	48
Health care and social assistance	*399*	*515*	116
Arts, entertainment, and recreation	*45*	72	27
Accommodation and food services	*666*	686	20
Other services, except public administration	283	303	20
Government	1,771	1,706	-65
Percent of Total			**% Change 2001–2009**
Total Employment			22.4%
Non-services related	*20.1%*	*25.1%*	52.9%
Farm	5.3%	11.2%	157.0%
Forestry, fishing, and related activities	*na*	*na*	na
Mining (including fossil fuels)	*5.3%*	5.9%	37.0%
Construction	5.7%	4.8%	3.0%
Manufacturing	3.8%	3.2%	4.1%
Services related	*47.4%*	*46.2%*	19.3%
Utilities	0.3%	*0.3%*	15.4%
Wholesale trade	1.6%	*1.6%*	20.6%
Retail trade	10.4%	7.6%	-10.9%
Transportation and warehousing	2.3%	1.7%	-6.8%
Information	*0.4%*	0.2%	-36.1%
Finance and insurance	*1.6%*	2.6%	98.6%
Real estate and rental and leasing	*0.8%*	2.4%	261.1%
Professional and technical services	*na*	*na*	na
Management of companies and enterprises	0.0%	*na*	na
Administrative and waste services	1.2%	2.7%	170.3%
Educational services	*2.0%*	*2.4%*	45.3%
Health care and social assistance	*7.7%*	*8.1%*	29.0%
Arts, entertainment, and recreation	*0.9%*	1.1%	60.8%
Accommodation and food services	*12.8%*	10.8%	3.0%
Other services, except public administration	5.4%	4.8%	7.1%
Government	34.0%	26.8%	-3.7%

All employment data are reported by place of work.
na: Not available. Estimates for data that were not disclosed are shown in italics. Actual and estimated data may not add to totals.
Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Table CA25N.

Figure 4-4. San Juan County Employment by Industry, 2001–2009



Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Table CA25N.

4.2 EARNINGS AND PAY

Labor earnings (or simply, earnings) are defined as the sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income (BEA 2010b). Since different industries have varied levels of average pay (see wage data below) and other compensation, the relative importance of various industries to an economy may differ when viewed via earnings, versus employment (as shown in the previous section).

Earnings for Grand County by industry for 2001 to 2009 are shown in Table 4-3 and Figure 4-5 in total dollars and as a percentage of total earnings. In 2009, the three largest industries by earnings are the same as the three largest industries by number of jobs, but the relative rankings and sizes are different. *Government* is the largest industry by earnings, with $50.4 million in earnings, or 26.2 percent of all earnings in the county. *Accommodation and Food Services* is the 2nd largest (17.8 percent), and *Retail Trade* is the 3rd largest (11.5 percent). *Accommodation and Food Services* had the largest numerical gain in earnings from 2001 to 2009 ($9.8 million), followed by *Government* ($8.4 million) and *Health Care and Social Assistance* ($4.7 million). The greatest percentage gains in this period were made in

Educational Services (118.1 percent), *Professional and Technical Services* (81.6 percent), and *Finance and Insurance* (72.6 percent). *Professional and Technical Services* did not show up as a top industry by employment in the discussion above, but based on the earnings data it appears to be an important emerging industry—besides having the 2nd highest rate of earnings growth, it also had the 5th highest numerical increase in earnings ($4.0 million). For comparison purposes, in earnings the *Mining* industry was the 8th largest industry in the county in 2009 and had the 10th largest increase in earnings from 2001 ($0.8 million, representing 14.6 percent growth). In summary, the earnings data shows the dominant importance of service sector industries, along with Government, to the Grand County economy.

For San Juan County, Table 4-4 and Figure 4-4 show earnings data for the same period. In 2009, by far the largest industry by earnings in this county was *Government*, with $80.5 million in earnings, or 42.8 percent of all earnings. The 2nd largest, at $25.3 million (13.5 percent of earnings) was *Mining.* The 3rd largest was *Health Care and Social Assistance* (9.6 percent), with *Accommodation and Food Services* close behind (8.8 percent). The largest numerical increases in earnings from 2001 to 2010 were in *Government* ($6.5 million), *Mining* ($5.7 million), and *Health Care and Social Assistance* ($3.8 million). The largest percentage increases (over 1,000 percent) were in two industries that barely had a presence in San Juan County in 2001 but grew to important size by 2009: *Finance and Insurance*, and *Information*. The 3rd largest percentage gain was in Administrative and Waste Services (276 percent), which also had the 4th largest numerical increase in earnings ($2.6 million). Notably, while *Farming* was a top industry in 2009 by employment, it does not show up as a top industry in the earnings data; in fact, it had negative earnings in 2009. This dichotomy frequently occurs in *Farming* in many parts of the nation and is due to the extreme volatility of income from year to year in this sector, relative to expenses. In summary, based on earnings data, the San Juan County economy has a very strong reliance on wages in the *Government* sector, with a strong role also played by *Mining* and certain service industries.

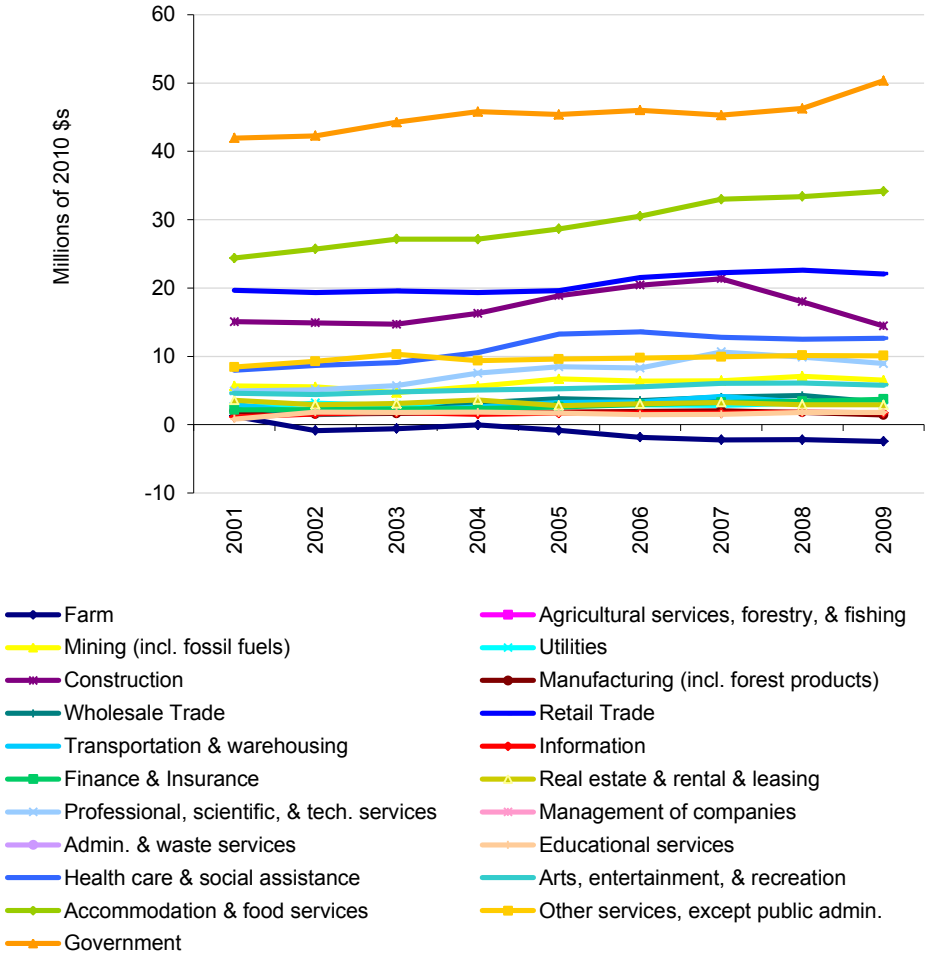
Table 4-3. Grand County Earnings by Industry, 2001–2009 (1,000s of 2010 $)

	2001	2009	Change 2001–2009
Labor Earnings	155,911	192,313	36,402
Non-services related	*23,947*	*19,909*	-4,038
Farm	1,257	-2,440	-3,697
Forestry, fishing, and related activities	*na*	*na*	na
Mining (including fossil fuels)	*5,671*	*6,500*	829
Construction	15,061	14,439	-622
Manufacturing	1,958	1,410	-548
Services related	*85,784*	*113,255*	27,471
Utilities	2,497	2,969	472
Wholesale trade	2,629	3,229	600
Retail trade	19,655	22,074	2,420
Transportation and warehousing	2,986	3,198	212
Information	*1,135*	1,727	591
Finance and insurance	2,158	3,726	1,568
Real estate and rental and leasing	3,579	2,907	-672
Professional and technical services	4,920	8,936	4,016
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*na*	*na*	na
Educational services	*829*	1,808	979
Health care and social assistance	*7,986*	12,648	4,662

	2001	2009	Change 2001–2009
Arts, entertainment, and recreation	4,596	5,785	1,189
Accommodation and food services	24,389	34,154	9,765
Other services, except public administration	8,424	10,094	1,670
Government	41,939	50,351	8,412
Percent of Total			**% Change 2001–2009**
Labor Earnings			23.3%
Non-services related	*15.4%*	*10.4%*	-16.9%
Farm	0.8%	-1.3%	-294.1%
Forestry, fishing, and related activities	*na*	*na*	na
Mining (including fossil fuels)	*3.6%*	*3.4%*	14.6%
Construction	9.7%	7.5%	-4.1%
Manufacturing	1.3%	0.7%	-28.0%
Services related	*55.0%*	*58.9%*	32.0%
Utilities	1.6%	1.5%	18.9%
Wholesale trade	1.7%	1.7%	22.8%
Retail trade	12.6%	11.5%	12.3%
Transportation and warehousing	1.9%	1.7%	7.1%
Information	*0.7%*	0.9%	52.1%
Finance and insurance	1.4%	1.9%	72.6%
Real estate and rental and leasing	2.3%	1.5%	-18.8%
Professional and technical services	3.2%	4.6%	81.6%
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*na*	*na*	na
Educational services	*0.5%*	0.9%	118.1%
Health care and social assistance	*5.1%*	6.6%	58.4%
Arts, entertainment, and recreation	2.9%	3.0%	25.9%
Accommodation and food services	15.6%	17.8%	40.0%
Other services, except public administration	5.4%	5.2%	19.8%
Government	26.9%	26.2%	20.1%

All earnings data are reported by place of work.
na: Not available. Estimates for data that were not disclosed are shown in italics. Actual and estimated data may not add to totals.
Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Table CA05N.

Figure 4-5. Grand County Earnings by Industry, 2001–2009



Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Table CA05N.

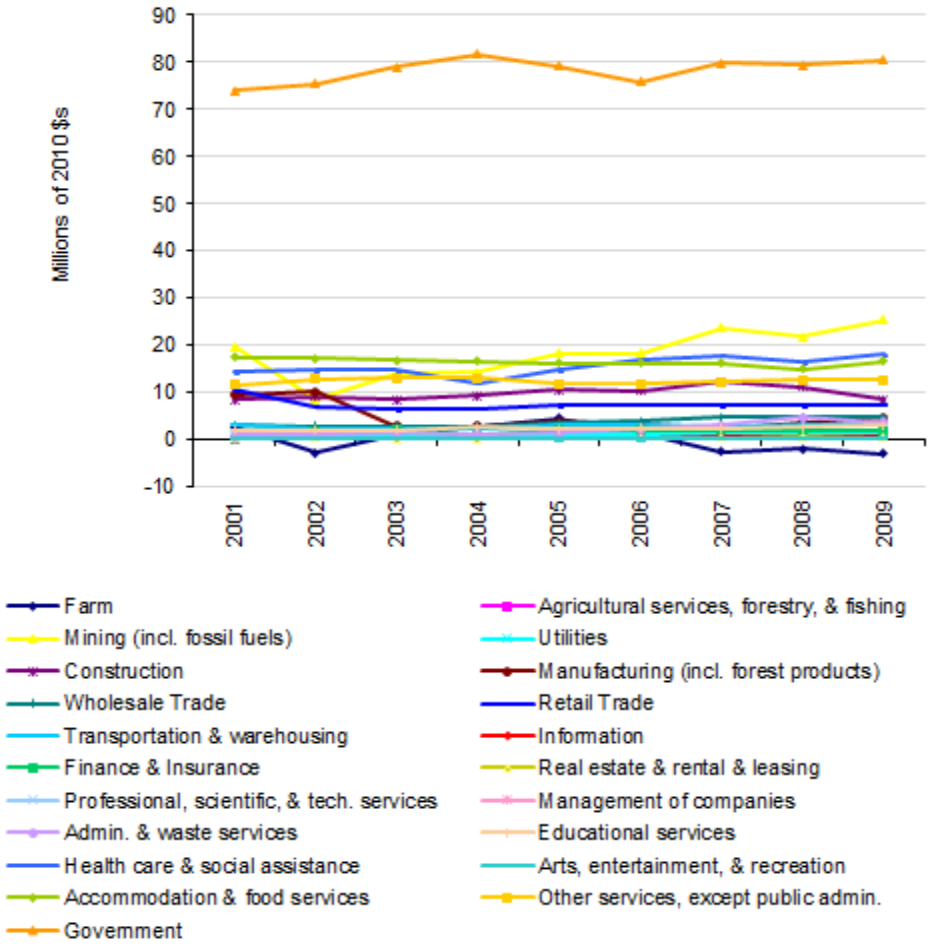
Table 4-4. San Juan County Earnings by Industry, 2001–2009 (1,000s of 2010 $)

	2001	2009	Change 2001–2009
Labor Earnings	160,322	188,047	27,725
Non-services related	*40,114*	*35,265*	-4,849
Farm	2,554	-3,050	-5,604
Forestry, fishing, and related activities	*na*	*na*	na
Mining (including fossil fuels)	*19,643*	25,300	5,657
Construction	8,357	8,371	15
Manufacturing	9,561	4,644	-4,917
Services related	*64,219*	*72,931*	8,712
Utilities	857	*1,180*	323
Wholesale trade	3,094	*4,763*	1,669
Retail trade	10,480	7,418	-3,063

	2001	2009	Change 2001–2009
Transportation and warehousing	3,164	2,982	-182
Information	*31*	576	546
Finance and insurance	*41*	1,729	1,688
Real estate and rental and leasing	*266*	366	100
Professional and technical services	*na*	*na*	na
Management of companies and enterprises	0	*na*	na
Administrative and waste services	951	3,576	2,625
Educational services	*1,923*	*2,900*	977
Health care and social assistance	*14,191*	*17,988*	3,797
Arts, entertainment, and recreation	*294*	282	-13
Accommodation and food services	*17,335*	16,627	-708
Other services, except public administration	11,591	12,543	952
Government	74,034	80,523	6,489
Percent of Total			**% Change 2001–2009**
Labor Earnings			17.3%
Non-services related	*25.0%*	*18.8%*	-12.1%
Farm	1.6%	-1.6%	-219.4%
Forestry, fishing, and related activities	*na*	*na*	na
Mining (including fossil fuels)	*12.3%*	13.5%	28.8%
Construction	5.2%	4.5%	0.2%
Manufacturing	6.0%	2.5%	-51.4%
Services related	*40.1%*	*38.8%*	13.6%
Utilities	0.5%	*0.6%*	37.7%
Wholesale trade	1.9%	*2.5%*	53.9%
Retail trade	6.5%	3.9%	-29.2%
Transportation and warehousing	2.0%	1.6%	-5.8%
Information	*0.0%*	0.3%	1778.4%
Finance and insurance	*0.0%*	0.9%	4084.6%
Real estate and rental and leasing	*0.2%*	0.2%	37.8%
Professional and technical services	*na*	*na*	na
Management of companies and enterprises	0.0%	*na*	na
Administrative and waste services	0.6%	1.9%	276.2%
Educational services	*1.2%*	*1.5%*	50.8%
Health care and social assistance	*8.9%*	*9.6%*	26.8%
Arts, entertainment, and recreation	*0.2%*	0.1%	-4.4%
Accommodation and food services	*10.8%*	8.8%	-4.1%
Other services, except public administration	7.2%	6.7%	8.2%
Government	46.2%	42.8%	8.8%

All earnings data are reported by place of work.
na: Not available. Estimates for data that were not disclosed are shown in italics. Actual and estimated data may not add to totals.
Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Table CA05N.

Figure 4-6, San Juan County Earnings by Industry, 2001–2009



Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Table CA05N.

Table 4-5 and Table 4-6 show average annual wages by industry for the two counties in 2010. They also show employment by industry to indicate the relative importance of each industry. The industry categories are different for these tables than the categories used in earlier tables. The wage data is from the Bureau of Labor Statistics, whereas the data for employment and earnings came from the Bureau of Economic Analysis, which uses slightly different categories. Wage levels are important because the best-paying jobs are not always in the largest industries.

The average annual wage in Grand County in 2010 was $27,562. This compares to an average annual wage in Utah of $40,641 (per EPS-HDT). It is typical for wages in rural counties to be lower than the state average, which includes large populations in high-wage urban areas. The highest average wages in Grand County were in the *Natural Resources and Mining* sector (this sector is a combination of Mining and other natural resource industries) at $59,935, followed by *Federal Government* ($50,351), and *State Government* ($45,889). *Construction, Local Government,* and several service industries also had average wages that were above the county-wide average. Notably, average wages in the *Leisure and Hospitality* industry (which in large part includes jobs in the *Accommodation and Food Services* industry in the BEA data used above) were well below the county-wide average, at $17,319. Jobs in this industry tend to be lower paying and are often seasonal or less than full-time.

In San Juan County, the average annual wage in 2010 was $31,680. The highest average wages were in *Natural Resources and Mining* ($56,857), *Federal Government* ($44,529), and *State Government* ($35,284). Other industries with average wages above the county-wide average were *Agriculture, Forestry, Fishing, and Hunting*; *Education and Health Services*; and *Local Government*. Jobs in many of the service sector industries in San Juan County had average wages below the county-wide average.

Table 4-5. Grand County Employment and Wages by Industry, 2010 (2010 $)

	Employment	% of Total Employment	Avg. Annual Wages	% Above or Below Avg.
Total	4,468		$27,562	
Private	3,563	79.7%	$25,264	-8.3%
Non-Services Related	380	8.5%	$42,225	53.2%
Natural Resources and Mining	111	2.5%	$59,935	117.5%
Agriculture, forestry, fishing and hunting	na	na	na	na
Mining (incl. fossil fuels)	na	na	na	na
Construction	243	5.4%	$35,802	29.9%
Manufacturing (Incl. forest products)	26	0.6%	$26,643	-3.3%
Services Related	3,183	71.2%	$23,239	-15.7%
Trade, Transportation, and Utilities	851	19.0%	$27,232	-1.2%
Information	30	0.7%	$30,194	9.5%
Financial Activities	162	3.6%	$27,624	0.2%
Professional and Business Services	221	4.9%	$31,195	13.2%
Education and Health Services	286	6.4%	$33,104	20.1%
Leisure and Hospitality	1,575	35.3%	$17,319	-37.2%
Other Services	59	1.3%	$30,110	9.2%
Unclassified	0	0.0%	$0	-100.0%
Government	905	20.3%	$36,607	32.8%
Federal Government	246	5.5%	$50,351	82.7%
State Government	78	1.7%	$45,889	66.5%
Local Government	581	13.0%	$29,541	7.2%

na: Not available.

Note: This table shows wage data from the Bureau of Labor Statistics, which does not report data for proprietors and the self-employed or the value of benefits and uses slightly different industry categories than those of the BEA used for employment and earnings data on previous pages of this report. As reported by the Bureau of Labor Statistics, wages include gross wages and salaries, bonuses, stock options, tips and other gratuities, and the value of meals and lodging.

Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Table 4-6. San Juan County Employment and Wages by Industry, 2010 (2010 $)

	Employment	% of Total Employment	Avg. Annual Wages	% Above or Below Avg.
Total	4,148		$31,680	
Private	2,597	62.6%	$30,320	-4.3%
Non-Services Related	775	18.7%	$43,122	36.1%
Natural Resources and Mining	401	9.7%	$56,054	76.9%

	Employment	% of Total Employment	Avg. Annual Wages	% Above or Below Avg.
Agriculture, forestry, fishing and hunting	14	0.3%	$33,864	6.9%
Mining (incl. fossil fuels)	387	9.3%	$56,857	79.5%
Construction	268	6.5%	$31,546	-0.4%
Manufacturing (Incl. forest products)	107	2.6%	$23,252	-26.6%
Services Related	1,822	43.9%	$24,874	-21.5%
Trade, Transportation, and Utilities	407	9.8%	$20,801	-34.3%
Information	na	na	na	na
Financial Activities	na	na	na	na
Professional and Business Services	195	4.7%	$29,987	-5.3%
Education and Health Services	509	12.3%	$32,724	3.3%
Leisure and Hospitality	563	13.6%	$19,949	-37.0%
Other Services	83	2.0%	$18,419	-41.9%
Unclassified	0	0.0%	$0	-100.0%
Government	1,551	37.4%	$33,958	7.2%
Federal Government	181	4.4%	$44,529	40.6%
State Government	306	7.4%	$35,284	11.4%
Local Government	1,064	25.7%	$31,779	0.3%

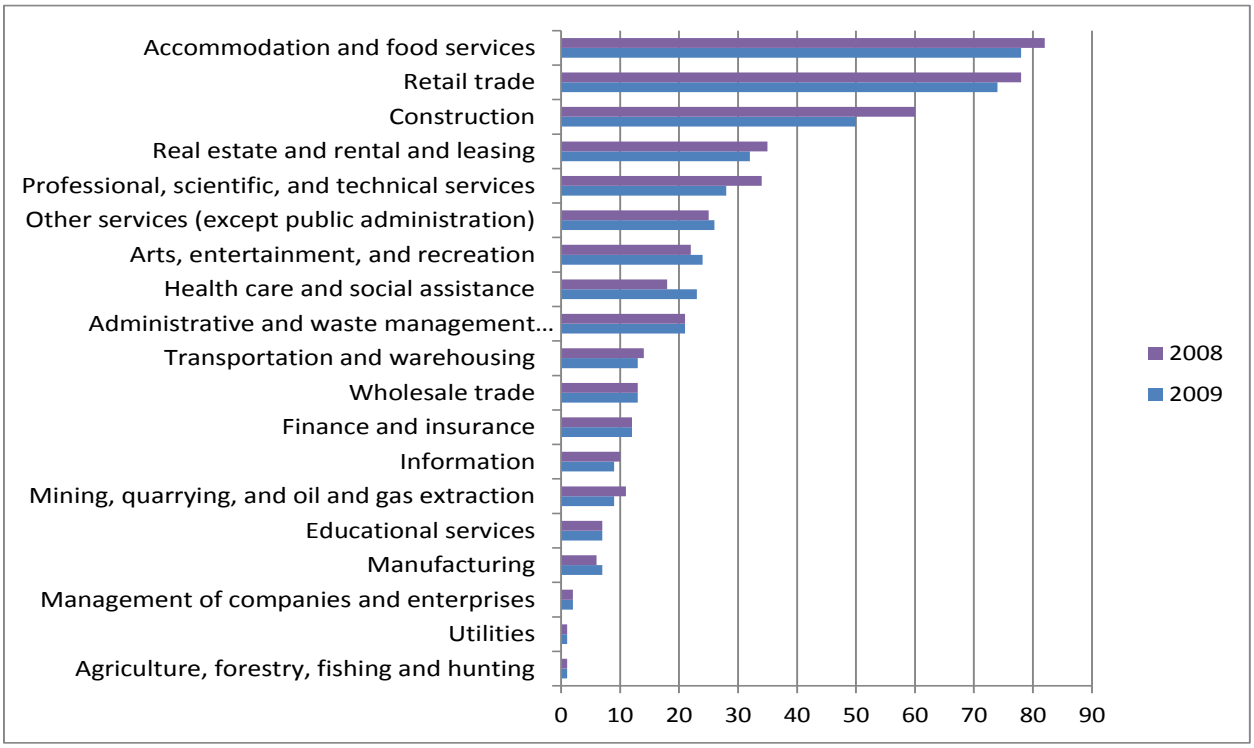
na: Not available.
Note: This table shows wage data from the Bureau of Labor Statistics, which does not report data for proprietors and the self-employed or the value of benefits and uses slightly different industry categories than those of the BEA used for employment and earnings data on previous pages of this report. As reported by the Bureau of Labor Statistics, wages include gross wages and salaries, bonuses, stock options, tips and other gratuities, and the value of meals and lodging.
Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

4.3 FIRMS

Figure 4-7 and Figure 4-8 show the relative number of firms by industry, within each county. The largest number of firms in Grand County in 2008 and 2009 was in *Accommodation and Food Services*, followed by *Retail Trade* and two industries of nearly identical size: *Construction,* and *Professional, Scientific, and Technical Services.* The number of firms in all but a few industries decreased from 2008 to 2009, no doubt largely due to the impacts of the recession. The decrease was most pronounced in the *Construction* industry.

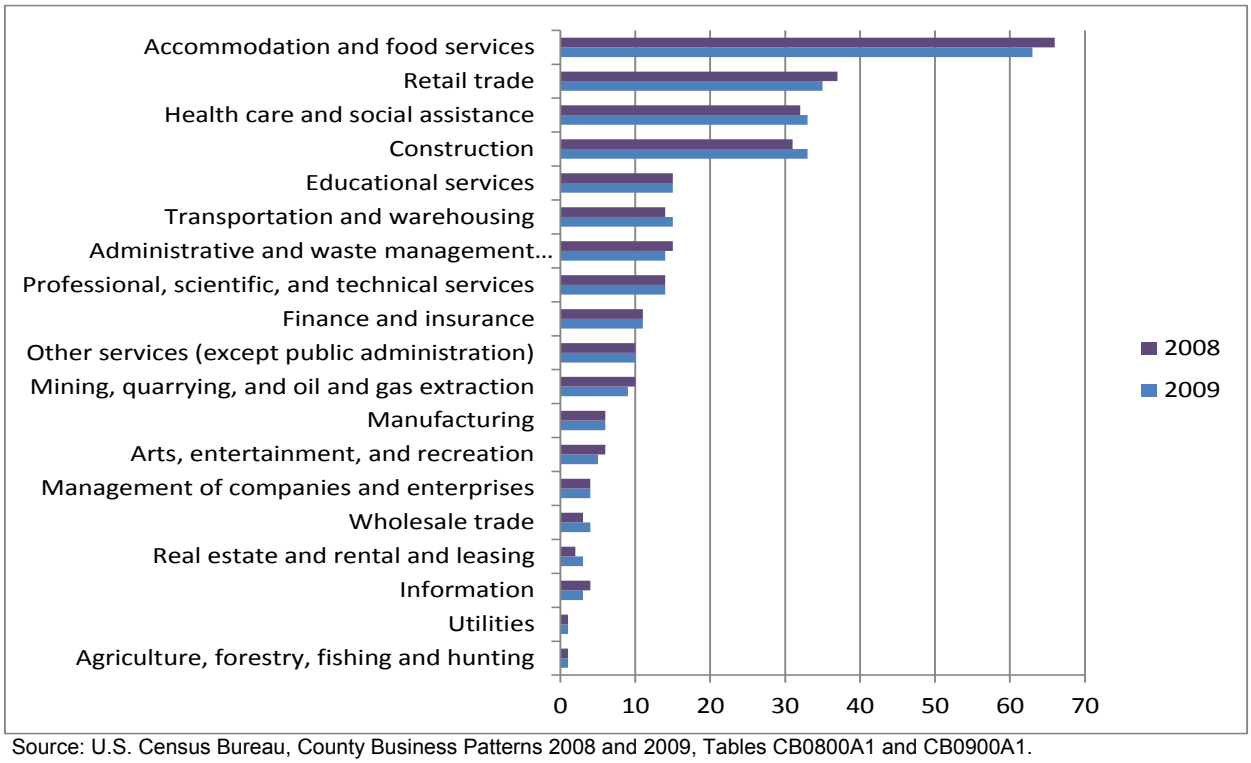
In San Juan County, the largest number of firms was also in *Accommodation and Food Services*, with Retail Trade also second, followed by two industries of nearly identical size: *Health Care and Social Assistance;* and *Construction.* As in Grand County, both *Accommodation and Food Services* and *Retail Trade* had decreases in the number of firms from 2008 to 2009. In both counties this likely reflects impacts to marginal firms from decreased tourism due to the recession. Among other industries, more held steady in the number of firms or even increased in San Juan County compared to Grand County. This may be because the greater reliance on government jobs and earnings (Sections 4.1 and 4.2) and government transfer payments (Section 4.4 below) buffered the decline of private sector economic activity in San Juan County due to the recession.

Figure 4-7. Total Number of Establishments in Grand County, 2008 and 2009



Source: U.S. Census Bureau, County Business Patterns 2008 and 2009, Tables CB0800A1 and CB0900A1.

Figure 4-8. Total Number of Establishments in San Juan County, 2008 and 2009



Source: U.S. Census Bureau, County Business Patterns 2008 and 2009, Tables CB0800A1 and CB0900A1.

4.4 PERSONAL INCOME

Personal income is income received from all sources, including income received from participation in production as well as from government and business transfer payments. Total personal income includes labor earnings (detailed in Section 4.2) and non-labor income, which includes dividends, interest, and rent, and also transfer payments. The definitions of these categories, and important components of these categories, are provided in Appendix A. Table 4-7 and Table 4-8 show trends in high-level categories of total personal income for the two counties of the socioeconomic study area.

The key trend shown in these tables is the long-term decrease in labor earnings as a percentage of total personal income, and the corresponding increase in non-labor income as a percentage of total personal income. Statewide, the percentage of income from non-labor sources has increased from 21.1 percent in 1970 to 31.9 percent as of 2009; nationally non-labor income increased from 22.7 percent in 1970 to 35.5 percent in 2009 (per EPS-HDT).

Both components of non-labor income—dividends, interest, and rent; and transfer payments—have increased statewide and nationally. Within transfer payments, income maintenance benefits (welfare) and unemployment insurance compensation income have remained relatively stable as a percentage of total income, while retirement and other income have increased. These trends reflect an aging population. As the average age has increased, a greater percentage of the population has entered retirement and left the workforce. In addition, income from dividends, interest, and rent has increased in Utah and nationally, as the wealth of upper income and upper middle income portions of the population has increased over recent decades.

Within the socioeconomic study area, non-labor income has become even more important than it is statewide and nationally. In 2009, non-labor income made up 46.7 percent of total personal income in Grand County, and 44.3 percent in San Juan County. As with the state and nation, both components of non-labor income—dividends, interest, and rent; and transfer payments—have increased significantly in both counties since 1970. However, in Grand County in 2009 the dividends, interest, and rent component was significantly larger than the transfer payments component. In San Juan County, the pattern was reversed, with transfer payments being almost twice as large as dividends, interest, and rent. This is probably due to two main factors. One is the older population profile, including retirees, of Grand County—older persons tend to have more assets that provide dividends, interest, and rent. The second is the large American Indian population of San Juan County, both on and off the reservation. This population tends to receive more government assistance than non-minority populations.

Table 4-7, Components of Personal Income, Grand County, 1970–2009 (1,000s of 2010 $)

	1970	1980	1990	2000	2009	Change 2000–2009
Total Personal Income	133,076	217,648	136,908	221,905	293,017	71,112
Labor Earnings	112,968	174,029	78,493	131,669	156,113	24,444
Non-Labor Income	20,108	43,619	58,415	90,236	136,904	46,668
Dividends, Interest and Rent	11,796	26,593	34,809	54,628	81,829	27,202
Transfer Payments	8,312	17,026	23,606	35,608	55,075	19,467
Percent of Total						**% Change 2000–2009**
Total Personal Income						32.0%
Labor Earnings	84.9%	80.0%	57.3%	59.3%	53.3%	18.6%
Non-Labor Income	15.1%	20.0%	42.7%	40.7%	46.7%	51.7%

	1970	1980	1990	2000	2009	Change 2000–2009
Dividends, Interest and Rent	8.9%	12.2%	25.4%	24.6%	27.9%	49.8%
Transfer Payments	6.2%	7.8%	17.2%	16.0%	18.8%	54.7%

Source: EPS-HDT Socioeconomic Measures Report, January 16, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Tables CA05 and CA05N.

Table 4-8, Components of Personal Income, San Juan County, 1970–2009 (1,000s of 2010 $)

	1970	1980	1990	2000	2009	Change 2000–2009
Total Personal Income	117,441	189,664	188,476	241,031	312,092	71,061
Labor Earnings	82,327	118,221	115,249	148,627	173,765	25,138
Non-Labor Income	35,114	71,442	73,226	92,404	138,327	45,923
Dividends, Interest and Rent	12,313	33,992	36,013	40,367	46,546	6,179
Transfer Payments	22,800	37,451	37,213	52,037	91,781	39,744
Percent of Total						**% Change 2000–2009**
Total Personal Income						29.5%
Labor Earnings	70.1%	62.3%	61.1%	61.7%	55.7%	16.9%
Non-Labor Income	29.9%	37.7%	38.9%	38.3%	44.3%	49.7%
Dividends, Interest and Rent	10.5%	17.9%	19.1%	16.7%	14.9%	15.3%
Transfer Payments	19.4%	19.7%	19.7%	21.6%	29.4%	76.4%

Source: EPS-HDT Socioeconomic Measures Report, January 16. 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Tables CA05 and CA05N.

Table 4-9 shows a breakdown of non-labor income in 2009 for the two study area counties, state, and nation. Note that the percentages in this table represent portions of non-labor income, whereas the previous tables reported percentages of total personal income. For Grand County, the table shows that the percentage of non-labor income from transfer payments (40.2 percent) is very similar to that for the state (42.8 percent). This percentage for San Juan County is much higher (66.4 percent). Within transfer payments, note that the percentage of non-labor income from retirement (e.g., Social Security) and disability insurance benefits is similar across all geographies (14.7 to 16.2 percent), as is the percentage from unemployment insurance benefits (2.4 to 3.1 percent) and several other small percentage payments at the bottom of the table. For Medicare payments, the figures for Grand County and Utah are relatively close (7.1 and 8.9 percent), as are the figures for San Juan County and the nation (10.9 and 11.6 percent). However, Medicaid payments (medical insurance benefits for the poor) are significantly higher in San Juan County (11.3 percent) than in Grand County, the state, and the nation (6.1 to 8.9 percent). The most notable difference is for income maintenance benefits (commonly referred to as welfare). These payments are a low percentage of non-labor income in Grand County, the state, and the nation (4.3 to 5.0 percent), but are a much higher percentage in San Juan County: 21.4 percent. The higher rates of Medicaid and welfare payments in San Juan County most likely reflect a much higher percentage of people who are indigent or otherwise eligible for these government benefits, including American Indian individuals.

Table 4-9. Components of Non-Labor Income, 2009 (1,000s of 2011 $)

	Grand County	San Juan County	Utah	U.S.
Total Non-Labor Income ($1000)	141,226	142,694	29,370,635	4,534,551,492
Dividends, Interest, Rent	84,413	48,016	16,803,734	2,299,296,630
Total Transfer Payments	56,813	94,679	12,566,901	2,235,254,861
Government payments to individuals	54,967	91,803	12,035,565	2,176,779,525
Retirement and disability insurance benefits	22,294	21,042	4,595,107	733,438,676
Medical payments	19,557	31,854	4,491,957	935,682,961
Medicare	10,030	15,620	2,610,823	524,511,316
Medicaid	9,358	16,113	1,800,373	402,215,443
Military	170	121	80,761	8,956,202
Income maintenance benefits (“welfare”)	6,453	30,576	1,255,262	228,421,934
Unemployment insurance benefits	3,829	4,467	711,064	136,451,537
Veterans benefit payments	1,185	1,073	294,008	53,922,792
All other gov’t payments to individuals	802	1,250	517,579	59,498,662
Payments to nonprofit institutions	1,086	1,691	312,498	34,391,520
Business payments to individuals	433	674	124,576	13,710,055
Percent of Total				
Dividends, Interest, Rent	59.8%	33.6%	57.2%	50.7%
Total Transfer Payments	40.2%	66.4%	42.8%	49.3%
Government payments to individuals	38.9%	64.3%	41.0%	48.0%
Retirement and disability insurance benefits	15.8%	14.7%	15.6%	16.2%
Medical payments	13.8%	22.3%	15.3%	20.6%
Medicare	7.1%	10.9%	8.9%	11.6%
Medicaid	6.6%	11.3%	6.1%	8.9%
Military	0.1%	0.1%	0.3%	0.2%
Income maintenance benefits (“welfare”)	4.6%	21.4%	4.3%	5.0%
Unemployment insurance benefits	2.7%	3.1%	2.4%	3.0%
Veterans benefit payments	0.8%	0.8%	1.0%	1.2%
All other gov’t payments to individuals	0.6%	0.9%	1.8%	1.3%
Payments to nonprofit institutions	0.8%	1.2%	1.1%	0.8%
Business payments to individuals	0.3%	0.5%	0.4%	0.3%

Source: EPS-HDT Profile of Non-Labor Income, February 14, 2012, based on 2011 data from the Bureau of Economic Analysis, REIS, Table CA05N and CA35.

4.5 ECONOMIC BASE

An area’s economic base is comprised of “basic industries” that bring outside income into the local economy. These industries export most or all of their goods and services outside the region, serving economic demand generated by non-local businesses and consumers. Manufacturing and mining are often thought of as basic industries, as they usually export most of their goods outside of the local area and are dependent on non-local economic factors.

By bringing in outside income, basic industries help support "non-basic" industries such as retail trade, housing, construction, and personal services that in most cases primarily serve locally generated economic demand. As new income is re-spent and circulated in the local economy, a "multiplier effect" occurs. The multiplier effect from re-spending of outside income is often very important in a study area's economy.

Some industries may be partly basic and partly non-basic, depending on local conditions. For instance, restaurants and retail stores are largely non-basic when they primarily serve local businesses and residents; in other areas they may be strongly basic if they serve large amounts of tourism-generated demand, thereby bringing expenditures from non-local tourists into the local economy.

Another way to think of economic base is in terms of specializations in the local economy compared to a larger economy such as the national economy. The specialization of certain geographic areas in certain industries has traditionally been tied to such factors as the natural resource base, transportation and other infrastructure, and cost factors such as labor. In areas with a high proportion of public lands, industries such as mining, grazing, and tourism may be important local economic specializations that bring outside income into the local economy.

Calculation of "location quotients" (LQ) is one way of assessing an area's economic base or specializations (Florida State University 2010). An LQ compares an industry's share of total local economic activity to the industry's share in a larger economy, such as the state or nation. The quotient is a ratio, where 1.0 indicates an equal share percentage between the local and larger economies. LQs under 1.0 signify a lesser share locally than for the larger economy; figures over 1.0 signify a greater share locally, and thus some degree of specialization of the local economy in that sector compared to the larger economy.[2] The greater the ratio, the greater the degree of specialization. LQs, however, must be interpreted along with data on the size of an industry. An industry could have a very high LQ but not be especially important locally if it provides only a small amount of an area's jobs or earnings.

LQs for employment and earnings for the socioeconomic study area are shown in Table 4-10 and Table 4-11. These quotients are based on a comparison of the study area's economy to the national economy using 2009 data (the most recent available).

For Grand County, the following industries have particularly high LQs *and* have a large share of employment and/or earnings (over five percent) in 2009. High LQs indicate the county has a specialization in these industries relative to the national economy, and they bring income into the county. High shares of employment and/or earnings indicate these industries have significant impact on the local economy.

- Construction – This industry has LQs of 1.23 and 1.38 for employment and earnings, respectively, while providing 6.7 percent of jobs and 7.5 percent of earnings.
- Retail Trade – This industry has LQs of 1.34 and 1.93 for employment and earnings, respectively, while providing 13.6 percent of jobs and 11.5 percent of earnings.
- Real Estate Rental and Leasing – This industry has an LQ of 1.55 for employment, while providing 6.7 percent of jobs. Its earnings LQ and share are unremarkable.
- Arts, Entertainment, and Recreation – This industry has LQs of 2.59 and 2.70 for employment and earnings, respectively, while providing 5.7 percent of jobs and 3.0 percent of earnings.

[2] *Put another way, if a ratio of 1.0 indicates the "expected" amount of economic activity based on the profile of the larger economy, the amount of activity that brings the ratio up to 1.0 probably serves local needs, while the amount that increases the ratio beyond 1.0 probably serves non-local needs. This is not uniformly the case; some industries such as mining may serve non-local needs almost entirely.*

- Accommodation and Food Services – This industry has LQs of 3.16 and 6.00 for employment and earnings, respectively, while providing 21.8 percent of jobs and 17.8 percent of earnings.
- Government – This industry has an unremarkable LQ of 0.98 for employment but an LQ of 1.44 for earnings, while providing 14.0 percent of jobs and 26.2 percent of earnings.

For Grand County, the following industries have high LQs, but small shares of employment or earnings. The county has a specialization in these industries relative to the national economy. They bring income into the county, but the impact of these industries on the county economy is smaller than that of the industries noted above.

- Mining – This industry has LQs of 2.60 and 2.39 for employment and earnings, respectively, but provides only 2.0 percent of jobs and 3.4 percent of earnings.
- Utilities – This industry has LQs of 1.60 and 1.75 for employment and earnings, respectively, but provides only 0.6 percent of jobs and 1.5 percent of earnings.

For Grand County, the following industry has large shares of employment and earnings, but relatively unremarkable LQs. It provides an important portion of jobs and earnings in Grand County, but the LQs indicate it is proportionately less extensive in Grand County than it is nationally.

- Health Care and Social Assistance – This industry provides 5.4 percent of jobs and 6.6 percent of earnings, but its LQs are only 0.50 for jobs and 0.60 for earnings.

For San Juan County, the following industries have particularly high LQs *and* have a large share of employment and/or earnings (over five percent) in 2009. High LQs indicate the county has a specialization in these industries relative to the national economy, and they bring income into the county. High shares of employment and/or earnings indicate these industries have significant impact on the local economy.

- Farming – This industry has an LQ of 7.37 for employment and provides 11.2 percent of jobs. Its LQ and share for earnings in 2009 are not meaningful, as this industry had negative earnings that year (as happens from time to time in farming).
- Mining – This industry has LQs of 7.59 and 9.5 for employment and earnings, respectively, while providing 5.9 percent of jobs and 13.5 percent of earnings.
- Accommodation and Food Services – This industry has LQs of 1.56 and 2.99 for employment and earnings, respectively, while providing 10.8 percent of jobs and 8.8 percent of earnings.
- Government – This industry has LQs of 1.89 and 2.35 for employment and earnings, respectively, while providing 26.8 percent of jobs and 42.8 percent of earnings.

For San Juan County, no industries have high LQs, but small shares of employment or earnings.

For San Juan County, the following industries have large shares of employment and/or earnings, but relatively unremarkable LQs. These industries provide an important portion of the county's jobs and or earnings, but their LQs indicate they are proportionately less extensive in San Juan County than they are nationally.

- Retail Trade – This industry provides 7.6 percent of jobs and 3.9 percent of earnings, but its LQs are only 0.75 for jobs and 0.66 for earnings.
- Health Care and Social Assistance – This industry provides 8.1 percent of jobs and 9.6 percent of earnings, but its LQs are only 0.75 for jobs and 0.87 for earnings.

Table 4-10. Location Quotients for Employment and Earnings in Grand County, Relative to the U.S. (2009)

NAICS Category	Employment		Earnings	
	LQ	Share of Total	LQ	Share of Total
Non-services related	***0.75***	***11.5%***	***0.57***	***10.4%***
Farm	0.96	1.5%	-1.63	-1.3%
Forestry, fishing, and related activities	N/A	N/A	N/A	N/A
Mining (including fossil fuels)	*2.60*	*2.0%*	*2.39*	*3.4%*
Construction	1.23	6.7%	1.38	7.5%
Manufacturing	0.18	1.3%	0.07	0.7%
Services related	***0.99***	***69.8%***	***0.93***	***58.9%***
Utilities	1.60	0.6%	1.75	1.5%
Wholesale trade	0.33	1.2%	0.33	1.7%
Retail trade	1.34	13.6%	1.93	11.5%
Transportation and warehousing	0.48	1.5%	0.50	1.7%
Information	0.59	1.1%	0.26	0.9%
Finance and insurance	0.38	2.0%	0.28	1.9%
Real estate and rental and leasing	1.55	6.7%	0.88	1.5%
Professional and technical services	0.62	4.2%	0.46	4.6%
Management of companies and enterprises	N/A	N/A	N/A	N/A
Administrative and waste services	N/A	N/A	N/A	N/A
Educational services	0.73	1.6%	0.59	0.9%
Health care and social assistance	0.50	5.4%	0.60	6.6%
Arts, entertainment, and recreation	2.59	5.7%	2.70	3.0%
Accommodation and food services	3.16	21.8%	6.00	17.8%
Other services, except public administration	0.74	4.2%	1.45	5.2%
Government	**0.98**	**14.0%**	**1.44**	**26.2%**

Italics indicate figures based on EPS-HDT estimates for data that were not disclosed by the BEA.
N/A: Not applicable; figure could not be calculated because neither reported nor estimated data are available.
The LQ is calculated as LQ = (ei/e)/(Ei/E), where ei is equal to the local measure (i.e., employment or earnings) in industry i, e is equal to the total local measure, Ei is equal to the reference area measure in industry i, and E is equal to the total reference area measure.
Source: Employment and earnings data from EPS-HDT Socioeconomic Measures Report, January 16, 2012 (county) and December 16, 2011 (U.S.), based on 2011 data from the Bureau of Economic Analysis, REIS, Tables CA25 and CA05N.

Table 4-11. Location Quotients for Employment and Earnings in San Juan County, Relative to the U.S. (2009)

NAICS Category	Employment		Earnings	
	LQ	Share of Total	LQ	Share of Total
Non-services related	***1.63***	***25.1%***	***1.04***	***18.8%***
Farm	7.37	11.2%	(2.09)	-1.6%
Forestry, fishing, and related activities	N/A	N/A	N/A	N/A
Mining (including fossil fuels)	7.59	5.9%	9.50	13.5%
Construction	0.88	4.8%	0.82	4.5%
Manufacturing	0.45	3.2%	0.24	2.5%

NAICS Category	Employment		Earnings	
	LQ	Share of Total	LQ	Share of Total
Services related	***0.66***	***46.2%***	***0.61***	***38.8%***
Utilities	*0.77*	*0.3%*	*0.71*	*0.6%*
Wholesale trade	*0.45*	*1.6%*	*0.50*	*2.5%*
Retail trade	0.75	7.6%	0.66	3.9%
Transportation and warehousing	0.55	1.7%	0.48	1.6%
Information	0.10	0.2%	0.09	0.3%
Finance and insurance	0.48	2.6%	0.13	0.9%
Real estate and rental and leasing	0.54	2.4%	0.11	0.2%
Professional and technical services	N/A	N/A	N/A	N/A
Management of companies and enterprises	N/A	N/A	N/A	N/A
Administrative and waste services	0.47	2.7%	0.52	1.9%
Educational services	*1.07*	*2.4%*	*0.96*	*1.5%*
Health care and social assistance	*0.75*	*8.1%*	*0.87*	*9.6%*
Arts, entertainment, and recreation	0.51	1.1%	0.13	0.1%
Accommodation and food services	1.56	10.8%	2.99	8.8%
Other services, except public administration	0.84	4.8%	1.84	6.7%
Government	**1.89**	**26.8%**	**2.35**	**42.8%**

Italics indicate figures based on EPS-HDT estimates for data that were not disclosed by the BEA.
N/A: Not applicable; figure could not be calculated because neither reported nor estimated data are available.
The LQ is calculated as LQ = (ei/e)/(Ei/E), where ei is equal to the local measure (i.e., employment or earnings) in industry i, e is equal to the total local measure, Ei is equal to the reference area measure in industry i, and E is equal to the total reference area measure.
Source: Employment and earnings data from EPS-HDT Socioeconomic Measures Report, January 16, 2012 (county) and December 16, 2011 (U.S.), based on 2011 data from the Bureau of Economic Analysis, REIS, Tables CA25 and CA05N.

4.6 PUBLIC FINANCE

BLM public lands and federal mineral estate managed within the socioeconomic study area affect government budgets at local (county, city, town, school district, and special district), state, and federal levels based on revenues from sales taxes, property taxes, Payments in Lieu of Taxes (PILT), mineral royalties, severance taxes, fees, and other funding sources. Likewise, lands and federal mineral estate in the socioeconomic study area result in government expenditures for management, law enforcement, and other activities. This public finance section addresses revenues; Section 4.7 addresses government expenditures. The information in this section is general; revenues from BLM-managed resources specific to the planning area, to the extent these revenues can be estimated, are covered in Chapter 5.

4.6.1 Federal Government Revenues

The federal government's Office of Natural Resources Revenue (ONRR) collects royalties and rents from leases of federal lands for production of coal, oil, gas, potash, and other minerals. Royalties for oil and gas are generally 12.5 percent of the value of production. Annual rental payments for oil and gas are $1.50 per acre for the first 5 years and $2.00 per acre each subsequent year. Royalties for potash (potassium) are 2 percent of the quantity or gross value of the output of potassium compounds and related products at the point of shipment to market. Rents for potash are $0.25 per acre in the first year, rising to $1.00 per acre for Year 6 and beyond. Rents for oil and gas are only paid on undeveloped oil and gas leases, which typically expire after 10 years if not developed. Potash leases pay lower rents, but the lease

is unending, as long as the rental fees get paid. Other minerals have different royalty and rental rates, as set out in 43 CFR Chapter II, Subchapter C, Minerals Management.

Royalties and rents are collectively referred to as mineral lease revenue. The federal government also collects bonuses on certain leases. Bonus payments are one-time payments (based on competitive bids) to the Federal Government for a leased parcel of federal land for a ten-year period for oil and gas.

The federal government returns 49 percent of the total collected revenues to the state in which the mineral production occurred.[3] In Utah, these payments are then distributed by the state by appropriation or statutory formula (Utah Code 59-21-1).

Utah received from the federal government $160.1 million in total mineral royalty payments in Fiscal Year (FY) 2011 (Utah GOPB 2011). Of this amount, Utah distributed $85.5 million to the Permanent Community Impact Board (PCIB). The PCIB, in turn distributes funds to county and local governmental entities for a wide variety of projects. These monies can be in the form of outright grants and/or low interest loans. The PCIB funds projects statewide on a competitive basis, and not necessarily to each county proportionate to its relative share of minerals production. The majority of the remaining mineral lease payments are distributed to counties, unusually proportionate to production within that county. Utah's total mineral lease payments to counties were $47,786,803 in FY2011. The counties are then legally required to distribute these monies to quasi-governmental entities known as Special Service Districts.

BLM Field Offices collect fees and other revenue for a variety of other uses of BLM lands. These revenue sources include right-of-way (ROW) rents, recreation fees, grazing fees, various permit fees, and more. Revenues from sales of land and vegetative and mineral materials, along with ROW rents, mostly go to the Federal treasury, while recreation fees are generally retained by the Field Office. Section 3 grazing permit fees generate revenue for the U.S. Treasury, of which 12.5% is returned to the local Grazing Board via the state in which the grazing lands are located. This money is then disbursed to local ranchers through the local Grazing Board, using a 40/60 matching-funds formula, for use in range improvements and maintenance projects, per the Taylor Grazing Act, Section 10.

4.6.2 State Government Revenues

As noted above, the federal government through ONRR pays the State of Utah 49 percent of the federal mineral lease and bonus revenues it collects from lands in the state. The state retains some of this revenue for state purposes, and distributes some to local governments.

The State of Utah collects several taxes and fees that derive from natural resources on both private lands and public lands:

- *Mining Severance Tax.* The tax is 2.6 percent of the taxable value of all metals or metalliferous minerals sold or otherwise disposed of. The taxable value varies according to the type of mineral. State revenue from this tax totaled $27.1 million in FY2011 (Utah Tax Commission 2012a).
- *Oil and Gas Severance Tax.* The tax ranges from 3 to 5 percent based on the value of the oil or gas, and 4 percent for natural gas liquids. Value is measured at the well or when the product

[3] The state share is sometimes said to be 50 percent. However, since FY2008, Congress has annually required a two-percent deduction (equivalent to one percent of total mineral revenues) from each year's state payments as part of the Interior, Environment, and Related Agencies Appropriations Acts to partially cover the costs of administering the federal mineral leasing program. This is a simpler form of an authority known as "net receipts sharing" that was in place until 2000. The state share was 50 percent between 2000 and 2008. See http://www.whitehouse.gov/sites/default/files/omb/budget/fy2012/assets/int.html, Mineral Leasing and Associated Payments section.

leaves the field where it is produced. State revenue from this tax totaled $59.9 million in FY2011 (Utah Tax Commission 2012a).
- *Oil and Gas Conservation Fee.* The fee is 0.2% of the value at the well. State revenue from this tax totaled $5.8 million in FY2011 (Utah Tax Commission 2012a).
- *Income Taxes.* There are various state income tax rates, depending on individual or corporate status, type of corporation, taxable income, etc. The state requires 5 percent withholding on most mineral production income (Utah Code 59-6-102).

Utah does not have a state severance tax on potash.

The amounts collected through the taxes and fees above are a function of sales prices and actual production, making estimates of future collections tenuous at best. Most severance tax revenues are remitted directly to the State's General Fund, making them available for expenditures as the legislature sees fit. Some of the severance tax revenue generated from oil and gas removed from Indian lands is set aside to be used for the benefit of Indian tribes in the state. There is no direct correspondence between a particular County's natural resource production and the amount (if any) of severance tax revenues flowing indirectly back to a county.

Mineral operations also produce revenue for the state through sales taxes on purchases of goods. In addition, employees of these firms, as well as their suppliers, indirectly contribute to state revenues through income taxes, and through sales taxes on re-spending of income.

4.6.3 Local Government Revenues

Local governments benefit from several sources of revenue related to public lands and minerals:

- Recreation, travel, and tourism-related revenues – primarily a variety of sales and use taxes that generate revenue as visitors to BLM public lands spend money on lodging, restaurants, other food, gas, equipment rentals, guide services, and other supplies and services. These taxes may be collected and retained by local government, or collected by the state but distributed back to local government. Businesses in this industry also pay property taxes to local governments.
- Natural resource-related revenues – including sales and use taxes from mining and agricultural businesses, property taxes on natural resources properties (including buildings and other improvements on public lands), property taxes on agricultural lands (ranching on private land is often closely tied to public grazing lands), distributions of federal mineral royalties received from the state, and distributions from or tied to BLM and USFS revenue collections such as grazing fees.
- Land ownership-related revenues – in particular, PILT payments that replace property taxes that would otherwise be collected if land were privately owned.

In Grand County and San Juan County, these revenues comprise an important portion of total local government revenues. A report by Headwaters Economics (2011) calculated that of total local government revenues in Grand County in FY2009, about $7.4 million was generated from travel and tourism industries (16% of total revenue), and about $2.4 million from natural resources industries, including mining (5% of total revenue). Land ownership-related revenues were only included in the study as "all other revenues."

For this Socioeconomic Baseline Report, the methodology used in the Headwaters Economics study was used—with slightly modifications, newer data used, and San Juan County included—to estimate shares of total revenues in each county represented by recreation, travel, and tourism-related revenues, and by natural resource-related revenues. The first step in this analysis was to calculate total revenues for all

local governments in each county, based on audited financial statements from the Utah State Auditor's Office. These figures are presented in Table 4-12 and Table 4-13.

Table 4-12. Local Government Revenues, Grand County

Local Government Entity	2010 Total Revenues
Canyonlands Health Care Special Service District	$501,341
Castle Valley Town	$142,282
Grand County	$14,358,841
Grand County Cemetery Maintenance District	$212,859
Grand County School District	$17,359,559
Grand County Service Area/Castle Valley Fire Protection District	$122,115
Grand County Special Service Recreation District	$710,873
Grand County Special Service Water District	$165,418
Grand County Transportation Special Service District	$261,708
Grand County Water Conservancy District	$83,155
Housing Authority of Southeastern Utah	$807,689
Moab Charter School	$416,981
Moab City	$8,813,908
Moab Mosquito Abatement District	$225,381
Moab Valley Fire Protection District	$623,206
Solid Waste Special Service District #1	$610,295
Spanish Valley Water and Sewer Improvement District	$1,739
Thompson Special Service District	$32,589
Total Revenues, All Local Government Entities	**$45,449,939**

Source: Local Government Audited Financial Statements. Figures from exhibit for Statement of Revenues, Expenditures, and Changes in Fund Balances – Governmental Funds, from Office of the Utah State Auditor, Local Governments' Financial Reports, accessed March 9, 2012 at http://www.sao.utah.gov/lgReports.html.

Table 4-13. Local Government Revenues, San Juan County

Local Government Entity	2010 Total Revenues
Blanding Cemetery Maintenance District	$100,680
Blanding City	$2,749,536
Bluff Service Area	$132,020
Bluff Water Works District	$59,784
Eastland Special Service District	$33,417
Monticello Cemetery Maintenance District	$39,060
Monticello City	$4,900,109
San Juan County	$18,035,176
San Juan County Water Conservancy District	$620,108
San Juan Health Care Services District	$8,769,429
San Juan Mental Health / Substance Abuse Special Service District	$1,729,961
San Juan School District	$40,850,120
San Juan Transportation District	$1,704,941
Total Revenues, All Local Government Entities	**$79,724,341**

Source: Local Government Audited Financial Statements. Figures from exhibit for Statement of Revenues, Expenditures, and Changes in Fund Balances - Governmental Funds, from Office of the Utah State Auditor, Local Governments' Financial Reports, accessed March 9, 2012 at http://www.sao.utah.gov/lgReports.html.

Next, specific revenue data were collected from several sources. For tourism-related revenues, the Utah State Office of Tourism provides estimates in its annual County Tourism Profiles. The methodology for these estimates was developed by the GOPB, Demographic and Economic Analysis section. The methodology uses tourism industry ratios developed from the "U.S. Travel and Tourism Satellite Accounts" of the U.S. Bureau of Economic Analysis, tourism expenditure data from the Shifflet Survey Utah, the IMPLAN (IMPact analysis for PLANning) economic impact model[4] to determine employment and tax impacts of the tourism expenditures, and county-level data on sales and use taxes by industry to distribute the tax estimates (Phipps 2012).

For natural resource-related revenues, several sources were used:

- The Utah Tax Commission, Property Tax Division's Annual Statistical Report provides data by county on real property taxes paid on agricultural lands, and on natural resource property; specifically, oil and gas wells, metal mines, coal mines, sand and gravel mines, and non-metal mines. The State of Utah assesses the value of natural resource property; county treasurers then set and collect taxes from these properties. On public lands, the values and taxes are based on the higher of: a) the value of equipment on the site, or b) discounted cash flow from production if the well or mine is producing.
- The Utah Tax Commission's Annual Report provides data on distributions to local governments of local sales and use taxes, which are collected by the state. The Tax Commission also provides data online for total taxable sales by industry, which can be used to allocate the tax distributions to specific industries; in this case, mining, and also agriculture, forestry, and commercial fishing.
- The EPS-HDT managed by Headwaters Economics includes a Payments from Federal Lands report that provides data on Federal Mineral Royalty distributions received at the county level, and agency-specific payments to local governments. In the socioeconomic study area these payments include BLM payments such as those based on fees collected under the Taylor Grazing Act, and USFS payments under the Secure Rural Schools program, which is a type of general revenue sharing that replaces payments previously made based on local commodity (e.g. timber) sales.

Table 4-14 summarizes the tourism-related and natural resources-related local government revenues obtained from the sources above.

Table 4-14. Local Government Revenues from Tourism and Natural Resource-Related Sources, 2010 (2010 $)

Revenue Source	Data Source	Grand County	San Juan County
Tourism-Related Revenues			
Local tax Revenues from Traveler Spending	1	$6,575,691	$1,600,705
Total Tourism-Related Revenues		*$6,575,691*	*$1,600,705*
Natural Resource-Related Revenues			
Natural resources property taxes (mineral related property)	2	$1,110,595	$5,489,709
Property tax – agricultural lands	2	$49,828	$132,563
Local sales and use taxes (distribution from state) – Mining sector	3	$12,966	$322,742
Local sales and use taxes (distribution from state) – Agriculture, Forestry, Fishing sector	3	$2,516	$435

4 *See the beginning of Chapter 5 for a brief description of the IMPLAN model.*

Revenue Source	Data Source	Grand County	San Juan County
USFS revenue distributions (Secure Rural Schools)	4	$78,434	$1,479,141
BLM revenue distributions (Primarily Taylor Grazing Act)	4	$56,085	$86,302
Federal Mineral Royalty distributions	4	$447,567	$874,149
*Total Natural Resource-Related Revenues***		*$1,757,993*	*$8,385,042*

* Property taxes paid by tourism-related businesses are not included.

** Utah mineral severance tax revenues and oil and gas conservation fee revenues distributed to local governments are not included. These revenues would be very difficult to quantify, as most of these revenues are placed in the state's General Fund (some is set aside to benefit Indian tribes). There is no direct correspondence between a particular county's natural resource production and the amount (if any) of severance tax revenues flowing back to the county or other local governments in the county.

Sources:

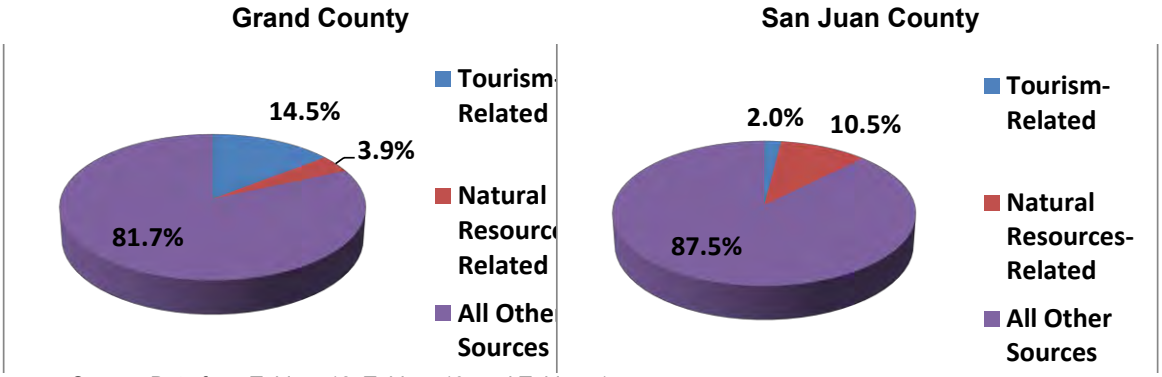
1. Utah Office of Tourism 2010 County Profiles, accessed March 2012 at http://travel.utah.gov/research_and_planning/countyprelim.html.
2. Utah Tax Commission, Property Tax Division, Annual Statistical Report 2010, Table 2B, accessed March 2012 at http://propertytax.utah.gov/reports-and-statistics/annual-statistical-report/2010-annual-statistical-report.html.
3. Utah Tax Commission, Annual Report 2010, accessed March 2012 at http://tax.utah.gov/commission/annual-reports; and Calendar Year Taxable Sales, accessed March 2012 at http://tax.utah.gov/esu/sales-yearly.
4. EPS-HDT Payments from Federal Lands Report, January 16, 2012, pages 7 (USFS), 8 (BLM), and 10 (Federal Mineral Royalties).

It is important to note that the sectoral estimates in the tables above are not specific to BLM-managed resources, or even to public lands generally. The tourism-related revenues are based on all tourism, which includes some activities on private property, as well as activities on state lands and other federal lands, including the local national parks and national forest. However, much of the tourism in both counties is based on the large and spectacular public lands base. The natural resource-related revenues include revenues from mining and agriculture on private property as well as public resources. Again, public lands and minerals are the basis for much of the activity in these industries in the two counties.

In addition, not all local government revenues from these sectors are captured in the estimates above. For instance, and probably most importantly in terms of revenue amounts, while real property taxes are captured for agriculture and mining, real property taxes of the many local businesses that are largely supported by tourism (e.g., many hotels, restaurants, outfitters, and guide services) are not captured above. Similarly, revenues from some personal property and motor vehicle property associated with mining and agriculture are not included above. There is no practical, reliable way to estimate these various revenues from the available data.

In spite of these limitations, the data above provides a good general indication of the relative importance of tourism-based and natural resource-based revenues to the local governments of the socioeconomic study area. Figure 4-9 shows the relative share of these sectors as a percentage of total local government revenues.

Figure 4-9. Relative Shares of Local Government Revenues by Source, 2010



Source: Data from Table 4-12, Table 4-13, and Table 4-14.

In summary, the tables and figures above show that tourism-related revenues are much larger in Grand County than in San Juan County, and form a larger share of total revenues. Natural resources-related revenues are much larger in San Juan County and form a larger share of revenues in that county. Of the two sources, tourism-related revenues are much larger than natural resources-related revenues in Grand County, and vise-versa in San Juan County.

Land ownership-related revenues from public lands, principally PILT payments, are included in the analysis above in the "All Other Sources" category. PILT payments cannot be specifically attributed to tourism or natural resources. PILT payments are made by the federal government to local governments to help compensate for lost property taxes resulting from tax-exempt federal lands located within the local jurisdiction. PILT payments are administered by DOI and are made for lands managed by BLM, the USFS, the National Park Service, and USFWS, as well as some federal water projects and military installations. Local governments use PILT payments to pay for various government services, such as law enforcement and infrastructure. The payments are calculated based on acreage on eligible lands within the county, population, and other federal transfers, such as mineral royalties.

In FY2010, Grand County received $1.128 million in PILT payments, and San Juan County received $1.323 million (DOI 2012). The portion of these payments that is attributable to BLM cannot be readily determined because of the complicated formula used to calculate the payments.

4.7 GOVERNMENT EXPENDITURES

4.7.1 State and Local Government Expenditures and Services

Management of BLM-administered land may affect state and local expenditures. For instance, recreation on public lands requires some support from local government for road maintenance, law enforcement, and search and rescue. Heavy truck traffic from mineral development and production may significantly impact roads. It is difficult to separate expenditures related to BLM-administered land from expenditures related to other land. Depending on the nature of the management alternatives identified in the MLP development process and the scope and scale of potential impacts, this topic may require further consideration during the impacts analysis phase of the process.

The types of state and local expenditures that may be affected include:

- Maintenance of state and local roads
- Law enforcement personnel and equipment
- Emergency medical services
- Search and rescue teams
- Conservation and wildlife management
- Fire management
- Solid waste collection and disposal
- Public utilities

These expenditures may be affected in two ways. First, increased use of public land resources may result in greater needs for the types of services and infrastructure listed above. For instance, increased backcountry recreational use may put greater demands on local search and rescue teams. Increased heavy truck traffic from oil and gas development may increase road maintenance needs.

In addition, in less common cases where use of public land resources leads to substantially increased employment opportunities (such as in an energy development boom), population in study area communities may increase, which often leads to increased demand for the services and infrastructure listed above, and may lead to additional needs, such as increased school space, teachers, and other public facilities and personnel.

4.7.2 BLM Expenditures

BLM expenditures related to federal lands benefit the local economy because federal salaries to land management staff that reside in the study area and federal contracts to businesses located in or with employees residing in the study area represent inflows of money. The impacts analysis phase of the planning process will consider whether there are differences between potential levels of BLM payroll and contract expenditures under the identified management alternatives. However, it is often very difficult to determine the percentage of BLM payroll and contracts that is attributable to a particular portion of BLM land within a Field or District Office.

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CHAPTER 5—BLM PUBLIC LAND USES AND VALUES

This chapter profiles some of the uses of BLM public lands in the decision area. It describes some of the economic and social implications of those uses, including quantitative values where available. As noted in the Introduction chapter of this report, social and economic impacts from MLP decisions are most likely to occur with respect to a) mineral development and production, and b) recreation. Therefore, these two resource uses are addressed in detail below. This includes some discussion of status and trends in these activities across the socioeconomic study area, as well as particulars for BLM public lands and the planning area. This chapter also briefly addresses additional resource uses that potentially could be impacted (livestock grazing, lands and realty). If warranted by the impacts analysis for the MLP management alternatives, these resource uses will be given additional attention in the EIS. This chapter also includes a discussion of non-market values, which are often overlooked when the economics of BLM public lands are discussed.

During the impacts analysis phase of this planning process, the economic impacts of the management alternatives will be estimated for certain BLM resource uses (most likely for minerals and recreation) using the IMPLAN economic impact model. The IMPLAN model was originally developed by the USFS and is commonly used by BLM, USFS, and many other government and private sector organizations to estimate the total economic impacts of various activities and policies. The model tracks inter-industry and consumer spending in a local or regional economy, allowing estimation of indirect and induced economic impacts in the economy that result from the original economic activity or change in economic activity. Indirect impacts result from the inter-industry transactions (e.g., when a recreation outfitter buys supplies from a local grocery store). Induced impacts result from re-spending of household income (e.g., when employees of the recreation outfitter buy goods for personal use at a local grocery store).

Outputs of the IMPLAN model include employment, income, and gross regional economic output. IMPLAN can also be used to estimate impacts for some types of tax revenues, although other approaches to these estimates are often applied.

To the extent possible, based on available data, this chapter focuses on resource use on BLM public lands specifically within the MLP planning area. Additional information at the Field Office level is available in a report titled “Contributions of the BLM Moab Field Office to the Grand County Economy” (BLM 2012).

5.1 MINERALS

Mineral development and production is a focus of the planning action to develop the BLM MLP. Thus, this section presents on overview of the development and production of key minerals (potash, and oil and gas) across the two-county socioeconomic study area. It also focuses on these minerals within the MLP area specifically.

5.1.1 Status and Trends in the Socioeconomic Study Area

Potash

Potash minerals, which are water-soluble potassium salts (typically potassium chloride), are commonly used as fertilizer and by the chemical industry for various products including glass, ceramics, and soap. Economically viable deposits of these minerals are rare, the socioeconomic study area being one of the few producers in the state and the nation, as described in a recent article from the Utah Geological Survey (Rupke 2012):

> *Utah is one of only three states in the U.S. that produces potash. Two companies, Intrepid Potash, Inc. (Intrepid) and Great Salt Lake Minerals (GSLM), produce potash at three locations in Utah: Great Salt Lake, Wendover, and Moab. At all locations, Utah's producers use solar evaporation ponds in which brine enriched with potassium is evaporated and concentrated, which leads to precipitation of potash minerals. Those minerals can then be collected, purified, and processed. Utah's warm, dry climate is well-suited for this efficient use of solar energy.*

The article provides a description of the resource in southeast Utah and the production process used at the Intrepid mine:

> *Near Moab, Intrepid produces potash from deeply-buried evaporites found in the Paradox Basin of southeast Utah. In the Paradox Basin, evaporites formed during the Pennsylvanian Period (~300 million years ago) in a restricted marine basin where seawater was concentrated, precipitated salt, and was subsequently diluted multiple times, producing bedded evaporite cycles. Several thousand feet of evaporites precipitated in the basin, and, during the times when the seawater was most concentrated, potash minerals formed and were deposited. At least 29 evaporite cycles have been identified in the Paradox Basin, and 18 of those cycles are known to have potash mineralization—although only a few of the cycles likely have economic significance. Intrepid solution mines two of the potash cycles by pumping water down a well, dissolving the potash minerals at depth, and pumping the potassium enriched fluid back up another well. The potash is then re-precipitated in surface evaporation ponds and harvested for processing.*

In recent years, interest in further development of the potash resources of the Paradox Basin has increased substantially. According to the article cited above, at least four companies have recently drilled or are planning to drill exploration holes in Grand and San Juan counties. This interest reflects recent increases in prices. After many years of stability, the price of potassium chloride rose in 2008 from $200 to $900 per metric ton (mt). Prices fell back to just over $300 per mt during the recession, and have risen since to over $500 per mt (Rupke 2012).

Table 5-1 shows potash production in recent years at Intrepid's Cane Creek Mine near Moab. This production (specifically, the off-site shipment of potash and salt) is a significant portion of total U.S. production. As a rough benchmark, in 2011 U.S. production totaled 1.1 million metric tons (Rupke 2012). The data in this table is taken from reports filed with the Utah Division of Oil, Gas, and Mining (DOGM). These reports also indicate that the total area disturbed by the Cane Creek Mine as of 2010 was 1,030 acres (Utah DOGM 2012a). Production, in terms of off-site shipments, has declined since 2006. Intrepid is in the process of moving production from an older zone to a new zone on the same property. Once the transition is complete, production is expected to return to past levels.

Table 5-1. Potash Production at the Intrepid Mine Near Moab, 2006–2010

Year	Gross Volume of Ore Mined (tons)	Off-Site Shipments of Potash and Salt (tons)
2006	534,993	223,899
2007	395,589	207,815
2008	490,032	182,854
2009	365,392	136,039
2010	438,904	N.A.

N.A.: Not Available.
Source: Utah DOGM 2012a.

The Intrepid potash mine employs a number of people and produces income that benefits the local economy. Currently the Intrepid operation employs 54 people (Christensen 2012).

The Intrepid mining operation is also a source of tax revenues. Utah does not have a state severance tax on potash. For the 2011 tax year, Intrepid paid Grand County a total of $782,972 in centrally assessed property taxes (Noonan 2012). For 2012, San Juan County levied $370,285 in property taxes on the Intrepid operation, on a total assessed value of $26.9 million (Sandberg 2012).

The entire Intrepid operation is on private land and leased state land. Because no federal mineral estate is included, the Intrepid mine does not produce any federal mineral revenues. If future potash operations of Intrepid or other companies utilize federal minerals in Grand or San Juan counties, as is being contemplated in this BLM planning action, they will produce federal mineral revenues. Rents per acre are minimal. The royalty rate is 5% of the gross value of the output of phosphates or phosphate rock and associated or related minerals, per 43 CFR 3504.21 as of August 2012.

Oil and Gas

Grand and San Juan counties both produce oil and gas. Neither county is currently a particularly large producer as a portion of total Utah production; nonetheless, the oil and gas industry in the counties provides jobs, income, and public revenues. Table 5-2 shows key oil and gas statistics for each county as a whole and for the state. BLM- and MLP-specific figures for the socioeconomic study area are provided in the next section.

As shown in Table 5-2, applications for permits to drill declined significantly in both counties after 2008, but especially in Grand County. Applications had not recovered to 2008 levels as of 2011 in either county. Drilling activity declined in Grand County and remained low as of 2011, while in San Juan County drilling activity as of 2010 and 2011 resumed at 2008 levels. During the same 2008 to 2011 period, oil production declined substantially in Grand County, probably due to the aging of existing wells and few new wells coming online. In San Juan County, oil production remained relatively stable. Historically, San Juan County has produced 39 percent of Utah's total oil production, while in 2011 the county provided 16 percent of the state's total production. Natural gas production declined in both counties from 2008 to 2011. Historically, San Juan County has produced 12 percent of Utah's total natural gas production, but in 2011 the county provided only 2 percent of the state's total production. Grand County's portion of statewide production has been and remains very small for both oil and gas.

Table 5-2. Oil and Gas Development and Production Indicators, 2008–2011

Indicator/ Area	2008	2009	2010	2011	Cumulative Lifetime Production
Application for Permit to Drill (number)					
Grand County	44	16	4	11	N.A.
San Juan County	27	15	22	11	N.A.
Utah	1,359	1,170	1,185	1,515	N.A.
Wells Spud (Drilling Commenced) (number)					
Grand County	26	3	5	2	N.A.
San Juan County	11	3	15	11	N.A.
Utah	1144	514	973	988	N.A.

Indicator/ Area	2008	2009	2010	2011	Cumulative Lifetime Production
Oil Production (barrels)					
Grand County	268,410	168,751	117,603	82,710	8,716,191
San Juan County	3,811,292	3,718,325	3,898,481	4,228,765	552,548,807
Utah	22,040,965	22,941,549	24,658,527	26,265,746	1,414,938,192
Natural Gas Production (MCF: 1,000 cubic feet)					
Grand County	6,243,909	5,069,217	4,487,035	4,127,064	370,105,633
San Juan County	13,377,282	10,268,266	9,845,954	9,467,079	1,387,185,840
Utah	442,524,298	449,636,557	438,425,739	461,695,054	11,201,062,460

N.A.: Not Available.
Source: Utah DOGM 2012b.

5.1.2 BLM Resource Use

BLM permits mineral extraction on public lands and federal mineral estate through three programs—Saleable Minerals, Locatable Minerals, and Leasable Minerals.

- *Leasable minerals* are minerals for which BLM issues leases, often through a competitive bidding process, allowing producers to access the mineral. Leasable minerals are divided into fluid and solid minerals. Leasable fluids include oil, gas, and geothermal. Solid leasables include coal, phosphate, potash, and sodium. Excepting coal, most solid leasables are used to make fertilizer and as feedstock for other industrial processes. Revenues from the leases are shared by the Federal Government and the state of origin. Many states direct portions of these revenues to local government. Many states also have severance taxes on some of these minerals, and state and local governments may levy property taxes on mineral production and/or mineral-related properties such as buildings and equipment.
- *Locatable minerals* include hard-rock minerals such as gold, silver, molybdenum, and uranium, and other minerals such as gypsum, silica, and specialized clay products. Miners locate and stake (file) claims in order to acquire the right to develop the mineral values in a specified area, under the provisions of the General Mining Law of 1872 as amended. Locatable minerals include both metallic minerals (precious and base metals) and non-metallic minerals (gemstones and industrial minerals). Locatable minerals may produce severance taxes, property taxes, and other revenues to state and local governments, but other than small claim staking and maintenance fees, produce little to no revenue to the Federal Government.
- *Salable minerals, also known as mineral materials*, consist of common varieties of sand, stone, gravel, cinders, clay, pumice and pumicite as described under the Materials Act of 1947 and the Surface Resources Act of 1955. No mining claims are required for their extraction. They are used in everyday building and other construction uses. These materials generally are bulky and their sheer weight makes their transportation costs very high. Adequate local supplies of these basic resources are vital to the economic life of any community. Saleable minerals are disposed of through a variety of contracted sales; most of the revenue goes to the Federal Treasury. Salable minerals may also produce severance taxes, property taxes, and other revenues to state and local governments.

The BLM Moab and Monticello Field Offices handle a large federal mineral estate that encompasses surface and subsurface mineral estates. BLM manages the subsurface federal mineral estate for BLM public surface lands. In addition, BLM manages minerals for additional land where the surface has passed into other ownership, but the Federal Government has retained the subsurface mineral estate.

Mineral exploration, development, and production on BLM-managed Federal mineral estate have many socioeconomic implications:

- Mineral exploration and mineral production generate economic activity through payments to labor and to capital both inside and outside of the socioeconomic study area.
- Mineral production generates tax revenue, with the types of revenue varying by state. As noted above, these revenues may include severance taxes and ad valorem taxes on mineral production. Additional tax revenues may include property taxes on mining buildings and equipment and other mine-related assets, personal and corporate income tax on mining income, and sales taxes.
- Some mineral production on Federal mineral estate generates revenues to the Federal Government. This is generally true for leasable minerals and salable minerals, but not for locatable minerals. Some of these Federal revenues are shared with the state, which may in turn share the revenues with local governments.
- Mineral exploration and production have social significance as livelihoods for persons in the industry, and to the cultural identity of certain communities and stakeholder groups.
- Mineral exploration and production may result in environmental impacts, demands on physical infrastructure, increased traffic, "boom and bust" economic cycles, and other impacts that have economic and social costs.

The focus of the current planning action is on leasable minerals; specifically oil, gas, and potash. Within the planning area, current and anticipated exploitation of locatable and salable minerals is limited; therefore, these resources are not discussed further here.

Potash

At present, there is no production of potash on federally owned mineral estate in the planning area. Thus there are currently no jobs, income, or public revenues attributable to BLM resources.

Oil and Gas

The economic impacts of the oil and gas industry can be separated into two phases:

- Development – the drilling and completion of wells, which occurs in a short time period
- Production – the operations and maintenance phase, driven by the value of the fluid minerals extracted each year

To the extent that wells are drilled on BLM-administered federal mineral estate, each phase has economic impacts (jobs and income) and public revenue impacts (royalties and taxes) that are attributable to BLM public lands. For the development phase, the general economic impact estimation methodology is as follows:

1. Obtain data on the number of oil and gas wells drilled and completed on the applicable federal minerals per year, and data on the costs of drilling and completion.
2. Determine total direct costs by multiplying wells drilled by the costs of drilling and completion.
3. Allocate total costs to the various economic sectors (petroleum and supporting industry segments) from which the various labor and supplies for mineral development are purchased.

4. Run these cost allocations through the IMPLAN economic impact model to determine direct, indirect, and induced economic impacts.

For the production phase, the general economic impact estimation methodology is as follows:

1. Obtain data on annual production from the applicable federal minerals, or estimate the production using other relevant data. Adjust the data as necessary to account for changes in production over the planning period (e.g., increasing numbers of oil and gas wells each year; production life cycles of wells or well fields).
2. Obtain data on monetary value of production per unit of production (e.g., prices).
3. Multiply production quantities by values per unit to determine the total value of production.
4. Allocate production values to the economic sector(s) that produce(s) the mineral in question.
5. Run these values through the IMPLAN economic impact model to determine direct, indirect, and induced economic impacts.

In addition, some public revenue impacts for the development phase, such as sales and property taxes, can be estimated using IMPLAN. For the production phase, public revenue impacts such as federal mineral royalties, severance taxes, and ad valorem taxes can generally be estimated using the obtained or estimated production values and the applicable royalty and tax rates. Public revenue impacts for historical development and production activities can also be estimated using high-level data on public revenues and/or production values and allocating those figures based on certain assumptions; for example, assuming that the revenues for a small area are proportional to the ratio between the number of wells in the small area and the number of wells in the larger area for which revenue data is available.

Current Impacts of the Development Phase for the MLP Planning Area

The average cost of drilling and completing a well in the planning area or the socioeconomic study area was not readily available for this Socioeconomic Baseline Report. Therefore, the economic impacts of the oil and gas development phase can only be estimated for a range of illustrative cost figures. Table 5-3 presents this impact analysis, using the IMPLAN model to derive the economic relationships for the socioeconomic study area. For example, if the average cost of drilling and completing a well is $2 million, local purchases of labor and equipment will generate in the socioeconomic study area $2.455 million in total economic output, producing $261,000 of labor income and 5 jobs. If 10 wells are developed in a year, the economic impacts would be essentially 10 times these figures. There were only 13 wells drilled in all of Grand and San Juan counties in 2011, and historically wells are drilled infrequently in the MLP planning area. According to BLM records, as of the end of 2011 there were only 15 producing oil and gas wells on federal mineral estate in the MLP planning area. In 2012, 4 new wells had been drilled on BLM-administered mineral estate in the MLP planning area as of mid-October.

It is important to note that the economic impacts of the development phase are short-term, as developing wells is a short-duration activity. The number of wells developed each year of the planning period is the driver of the total economic impacts; the impacts do not accumulate over time. In addition, the local economic impacts of drilling are limited, because the drilling rigs and their key workers typically come from outside the socioeconomic study area, so payments to the drilling company and many of the workers on the drill site mostly flow out of the study area as well.

Table 5-3. Economic Impacts from Drilling One Well Under a Variety of Cost Assumptions (2011 $)

Development Cost (One Well)	Effect Type	Employment (jobs)	Labor Income	Gross Economic Output
$2 million	Direct	2.5	$161,320	$2,164,915
	Indirect	1.6	$73,471	$205,681
	Induced	0.8	$25,968	$84,589
	Total	**5.0**	**$260,759**	**$2,455,185**
$3 million	Direct	3.8	$241,980	$3,247,372
	Indirect	2.5	$110,207	$308,522
	Induced	1.3	$38,951	$126,884
	Total	**7.5**	**$391,138**	**$3,682,777**
$4 million	Direct	5.0	$309,917	$4,000,000
	Indirect	3.3	$141,147	$389,250
	Induced	1.7	$49,887	$164,379
	Total	**10.0**	**$500,952**	**$4,553,629**
$5 million	Direct	6.3	$403,300	$5,412,287
	Indirect	4.1	$183,678	$514,203
	Induced	2.1	$64,919	$211,473
	Total	**12.4**	**$651,896**	**$6,137,962**

Source: BLM analysis using IMPLAN 3.0

Development phase public revenue impacts are also short-term and not cumulative. IMPLAN allows estimation of impacts on state and local tax collections. Table 5-4 summarizes these contributions. As above, at this time the impacts are presented based on a range of illustrative figures for the cost of drilling and completing a single well. For example, IMPLAN estimates state and local tax benefits from a well costing $2 million to total $43,015. The largest benefits from a specific tax derive from sales taxes. Property taxes, state income taxes on corporate and employee earnings, and a variety of other taxes and fees are also important. As noted above, the current drilling rate on BLM resources in the MLP planning area is low. Thus the current contributions of the development phase to public revenues are small.

Table 5-4. Contributions to State and Local Tax Collections from Drilling One Well (2011 $)

Development Cost (One Well)	Property Tax	Sales Tax	State Income Tax	Other*	Total Public Revenue
$2 million	$8,522	$11,811	$9,551	$13,131	$43,015
$3 million	$12,783	$17,717	$14,326	$19,696	$64,522
$4 million	$16,372	$22,691	$18,348	$25,226	$82,637
$5 million	$21,305	$29,529	$23,877	$32,825	$107,536

* This category includes a variety of smaller direct and indirect taxes and payments such as motor vehicle, fuel, and fines and fees.

Source: BLM analysis using IMPLAN 3.0

Current Impacts of the Production Phase for the MLP Planning Area

Estimating the current impacts of the production phase attributable to BLM resources in the planning area requires either: a) quantification of the actual production from these resources, or b) identification of the number of wells on BLM resources in the planning area and the proportion these wells represent of the total wells for a larger geography that has readily available data. Actual production from current wells on BLM resources in the planning area could not readily be determined. Given that production and market prices rise and fall regularly, estimates using the second approach are a feasible and adequate proxy. Therefore, the number of wells was identified using BLM records and staff knowledge, and compared to the number of wells in the two counties of the socioeconomic study area. Table 5-5 presents this analysis. There are currently 15 producing wells on BLM public lands in the MLP planning area. These wells constitute 4.37 percent of all producing wells (343) on BLM public lands in both counties, and 2.31 percent of all wells under all types of mineral ownership (649) in both counties.

Table 5-5. Producing Oil and Gas Wells within Grand County, San Juan County, and the MLP Planning Area (late 2011)

Location	Producing Oil and Gas Wells	Producing Oil and Gas Wells on BLM
Grand County	286	224
San Juan County	363	119
Two County Total	649	343
MLP Planning Area	15	15
MLP Wells as a Percentage of Two-County Total	2.31%	4.37%
MLP Wells on BLM as a Percentage of All Wells (649) in the Two Counties		2.31%

Source: Utah BLM corporate Geographic Information System (GIS) data and Moab BLM staff.

The primary economic impacts (jobs, income) in the production phase are from operation and maintenance (O&M) of the oil and gas wells. These O&M activities are not very labor intensive. In most oil fields they typically average a few tenths of 1 job annually per well. Thus the number of jobs (and the labor income) associated with the 19 current wells (15 as of 2011 plus 4 new in 2012 to date) on BLM-administered minerals in the MLP planning area is small. In the impact analysis phase of the planning process, additional data will be sought or estimated, in order to allow use of IMPLAN for quantification of the economic impacts of production on BLM public lands in the MLP planning area going forward through the planning period.

With respect to current public revenue impacts, available higher level data together with the ratios of wells on BLM public lands to all wells allows for rough quantification using several assumptions. The following discussions address federal mineral royalties first, then state and local taxes.

Utah received from the federal government $160.1 million in total mineral royalty payments in FY2011 (Utah GOPB 2011). Utah distributed $85.5 million to the PCIB. The PCIB, in turn, distributes funds to county and local governmental entities for a wide variety of projects. These monies can be in the form of outright grants and/or low interest loans. The PCIB funds projects statewide on a competitive basis, and not necessarily to each county proportionate to its relative share of minerals production. The majority of the remaining mineral lease payments are distributed to counties, usually proportionate to production within that county. Utah's total mineral lease payments to counties were $47,786,803 in FY2011. The counties are then legally required to distribute these monies to quasi-governmental entities known as Special Service Districts.

In FY2011, the State distributed $451,815 to Grand County and $970,123 to San Juan County (Utah Department of Transportation [UDOT] 2012). Contributions of the two counties to federal mineral revenues are almost entirely from federal oil and gas leases. Therefore, effectively all of the state distributions to the counties can be attributed to the 343 producing oil and gas wells on BLM-administered federal minerals. Assuming the 15 wells (as of 2011) on BLM public lands in the MLP planning area produced at the same average rate as the average for all wells on federal leases in the two counties, then 4.37 percent of the state distributions to the counties are attributable to these 15 wells, or $19,744 for Grand County and $42,394 for San Juan County.

Mineral operators pay several taxes that benefit state and local governments, including severance, conservation, and property taxes; sales taxes on purchases of goods; and payroll taxes. Employees of these firms, as well as their suppliers, also indirectly contribute to state and local tax revenues through income and sales tax payments.

As described in Section 4.6.2, the State of Utah collects severance taxes on oil and gas and mining production within the state. Most severance tax revenue goes to the State's General Fund and is then distributed as part of the regular appropriations process. There is no direct correspondence between a particular county's natural resource production and the amount (if any) of severance tax revenues flowing back to the county. However, it is possible to estimate the contribution the individual counties' mineral production activities make to the State. From there, one can further estimate the contribution per well within the MLP planning area. Severance taxes from oil and gas production paid across the State totaled $59.9 million in FY2011 (Utah Tax Commission 2012a). Although the different types of wells pay severance taxes at slightly different rates, a county's share of total production, regardless of well type, is the best estimate available with non-proprietary data. Table 5-6 shows estimates of current severance tax contributions from producing wells in Grand and San Juan counties and the wells on BLM-administered public lands within the MLP planning area. It should be emphasized that this table presents estimates of *collections* by the state, *not distributions* to the counties.

Table 5-6. Estimates of Severance Tax Collections, 2011

Geography	Producing Oil and Gas Wells*	Total Oil and Gas Severance Tax Collections and Location Estimates (FY2011)**	Estimated Contribution per Well
Utah	10,244	$59,855,286	$5,843
Grand County	286	$1,671,087	$5,843
San Juan County	363	$2,120,995	$5,843
Two County Total	649	$3,792,081	$5,843
MLP Planning Area, Wells on BLM	15	$87,645	$5,843

*For Utah—Utah DOGM (2012b), Well Counts, as of December 29, 2011 (excludes low production "stripper" wells). For other geographies—Table 5-5.
** For Utah—Utah Tax Commission (2012a). For other geographies—estimates based on share of wells.

The State of Utah also levies a relatively small conservation fee on the sales value of oil and gas produced within the state. In 2011, the rate was 0.2 percent of the sales value of oil and gas production. Collections from this tax totaled $5.784 million in FY2011 (Utah Tax Commission 2012a). Based on the well count data in Table 5-6, and assuming equal production per well, this amounted to an average of $565 for each of the 10,244 producing oil and gas wells in the state, or $8,475 for the 15 wells on BLM-administered public lands within the MLP planning area.

Grand and San Juan counties both levy property taxes on infrastructure associated with minerals operations. The tax is based on assessed values and current tax rates. Property taxes assessed on property associated with minerals operations (including pipelines) generate tax revenue for the counties. With respect to this planning effort, the greater the number of producing wells in the MLP planning area, the greater the generation of property taxes associated with oil and gas extraction assets. These property taxes are assessed centrally by the State, and billed and collected by the counties.[5]

Figures from the Utah Tax Commission for FY2011 indicate that property taxes collected from oil and gas producing properties totaled $728,963 for Grand County, and $4,983,254 for San Juan County (Utah Tax Commission 2012b). On a per well basis, this amounts to $2,549 per well for Grand County and $13,728 per well for San Juan County, or $8,802 per well for both counties combined. These are taxes levied on oil and gas facilities for all lands in the two counties, of which BLM constitutes a part. The 15 wells on BLM-administered public lands within the MLP planning area, assuming equal production per well as the two-county average, generate an estimated $130,030 in property taxes for the two counties.

Oil and gas pipelines also produce property taxes. In FY2011, such pipelines generated $615,705 in property tax revenues for Grand County, and $682,015 for San Juan County. It is not possible to attribute portions of this revenue to the BLM-administered wells in the MLP planning area without additional information on the value of any pipelines serving those wells as a proportion of the value of all pipelines in the counties. It is likely that the contributions of these wells to this revenue source are small.

Impacts of oil and gas production on other state and local taxes (e.g., sales taxes, income taxes, etc.) can be estimated using the IMPLAN model. There is insufficient information on the current wells (i.e., actual production values) to run these estimates. In the impacts analysis phase, it may be possible to run these tax revenue calculations based on additional information that allows estimates of the value of production of wells on BLM-administered public lands within the MLP planning area.

5.2 RECREATION

5.2.1 Status and Trends in the Socioeconomic Study Area

The two counties of the socioeconomic study area are rich in outdoor recreational resources. These resources are enjoyed by local residents and attract many non-residents. Visitation for outdoor recreation—whether passive pursuits like scenic drives or high-energy active sports like slickrock mountain bike riding and OHV riding—supports a vibrant tourism industry. This industry is an important economic base for the socioeconomic study area, as shown in the Economic Conditions section above.

The Utah Office of Tourism maintains statistics on the tourism industry for all counties in the state. Table 5-7 shows that in both Grand and San Juan counties, traveler spending, tourism-related employment, and local tourism tax revenues all increased from 2006 to 2008. These indicators dipped in 2009, presumably reflecting the impacts of the recession. In 2010 the indicators increased in Grand County to levels that exceeded those of 2008, while in San Juan County the indictors increased marginally. This data indicates

5 *The State of Utah assesses certain types of real and personal property for purposes of determining tax bills. The determined amounts are certified to the counties, which bill and collect the property taxes. Property which is centrally assessed includes public utilities, mines, railroads, and natural resource developments (e.g., oil and gas wells). The assessment includes taxes on land, improvements upon the land (including buildings and other permanently placed structures), and personal property (primarily equipment). The tax bill submitted by the county is for a single amount that comprises these elements. The land portion of the property tax is assessed only on private land and long-term leased state lands. Centrally assessed taxes are levied on all buildings, improvements, infrastructure and equipment, regardless of underlying land ownership (Hurst 2012).*

that Grand County's tourism industry is recovering from the recession much more quickly than the tourism industry in San Juan County. Figures for 2011 were not available when this report was written.

Table 5-7. Tourism Spending, Employment, and Tax Revenue, 2005–2010

	2005	2006	2007	2008	2009	2010
Grand County						
Spending by Travelers (000s)	$94,000	$93,800	$106,200	$122,077	$107,464	$125,729
Tourism Related Employment	1,491	1,525	1,549	2,413	2,073	2,367
Local Tourism Tax Revenue (000s)	$2,530	$2,483	$2,268	$6,482	$5,632	$6,576
San Juan County						
Spending by Travelers (000s)	$26,700	$26,500	$31,200	$34,783	$29,025	$30,606
Tourism Related Employment	446	483	630	687	559	576
Local Tourism Tax Revenue (000s)	$753	$746	$2,980	$1,847	$1,521	$1,601

Source: Utah Office of Tourism, State and County Economic and Travel Indicator Profiles, reports for 2007–2010.

Table 5-8 shows visitation trends at major natural resource-based recreation and tourism sites in the socioeconomic study area. While some sites have seen ups and downs in visitation during the 2005 to 2010 period, in general, visitation at these sites has been relatively constant or has increased through this period. This indicates that visitation to major natural resource-based attractions provides a relatively recession-proof base of economic activity for the study area. The data in the table above shows that tourism spending and related indicators experienced somewhat greater impacts from the recession. This may indicate that during the economic downturn, visitation by locals increased while visitation by non-locals, who have higher levels of spending, decreased. This pattern has been observed in other recessionary periods in many U.S. locations.

Table 5-8. Annual Visitation to Natural Resource Attractions, 2005–2010

Site	Number of Visits					
	2005	2006	2007	2008	2009	2010
Arches National Park	781,667	833,046	860,175	928,794	996,306	1,022,823
Canyonlands National Park	393,672	413,587	417,560	436,713	436,819	435,907
Glen Canyon National Recreation Area	1,908,723	1,876,668	1,897,021	1,897,021	2,038,931	2,120,559
Hovenweep National Monument	26,658	26,341	26,087	25,408	27,855	27,384
Natural Bridges National Monument	121,244	91,288	88,310	91,833	92,022	95,752
Rainbow Bridge National Monument	80,99	87,642	81,607	95,567	112,447	104,501
Dead Horse Point State Park	137,265	169,206	172,176	184,560	179,157	169,595
Edge of the Cedars State Park	10,446	17,420	13,516	13,516	11,981	12,416

Site	Number of Visits					
	2005	2006	2007	2008	2009	2010
Goosenecks State Park	58,910	50,340	58,096	58,096	66,722	65,545
Green River State Park	20,937	22,857	20,217	21,142	25,190	23,282
Thompson Springs Welcome Center	86,718	84,327	85,222	76,847	82,695	79,442

Source: Utah Office of Tourism, State and County Economic and Travel Indicator Profiles, reports for 2007–2010.

5.2.2 BLM Resource Use

BLM public lands in the socioeconomic study area are used for a wide variety of recreational pursuits. BLM categorizes recreation in three ways: dispersed recreation, developed recreation, and activities managed under special recreation permits.

- Dispersed Recreation – This refers to all recreation occurring outside of developed recreation sites. Popular dispersed uses include: hiking, backpacking, mountain biking, OHV riding, hunting, rock climbing, photography, automobile touring/sightseeing, bird watching, camping, rock hounding, and visiting archeological sites.
- Developed Recreation – Developed recreation sites incorporate visitor use infrastructure such as roads, parking areas, and facilities to protect the resource and support recreational users in their pursuit of activities, experiences, and benefits. Visitor use infrastructure is a management tool that can minimize resource impacts, concentrate use, and reduce visitor conflicts.
- Special Recreation Permitting – Five types of uses requiring special recreation permits (SRPs) are authorized by the Federal Lands Recreation Enhancement Act of 2004: commercial, competitive, vending, individual or group use in special areas, and organized group events. SRPs are issued to manage visitor use, protect natural and cultural resources, and accommodate commercial recreational uses and may be issued for ten years or less with annual renewal. Commercial SRPs are issued to outfitters, guides, vendors, recreation clubs, and commercial competitive event organizers providing recreational opportunities or services without employing permanent facilities.

All recreation activities provide socioeconomic value. The value may be as simple as increased quality of life for the participants, which can be measured as described in the section on non-market values. In addition, recreationists often spend money in order to recreate. Local recreationists pay for gas to reach a site, and may buy equipment, purchase food and drink, and make other purchases locally. Non-local recreationists may do all this, and pay for lodging, restaurants, guides and outfitters, etc. All of these actions generate local economic activity. Expenditures by non-local recreationists are particularly important as they represent new income in the region.

The market-based economic impacts of recreation on BLM public lands can be estimated using the IMPLAN model. The general economic impact estimation methodology is as follows:

1. Quantify recreational visitation to the area of interest (i.e., BLM public lands in the MLP planning area).
2. Estimate the local (Grand and San Juan counties) expenditures of the recreational users associated with their recreational visits.
3. Multiply visitation by expenditures per visit to determine total expenditures.
4. Allocate the total expenditures to the various economic sectors (lodging, retail, services, etc.) to which the various portions of the expenditures accrue.

5. Run these value allocations through the IMPLAN economic impact model to determine direct, indirect, and induced economic impacts.

With respect to Step 1, recreational use is tracked in BLM's Recreation Management Information System (RMIS), based on data from traffic counters, visitor registers, and other sources. The Moab and Monticello Field Offices have very active recreation management programs, and their recreation data is considered reliable. Recent recreation use levels in the MLP planning area are shown in Table 5-9. These figures include recreational use under SRPs as well as general use (dispersed recreation and developed site recreation).

Table 5-9. Recreation Use Levels in the MLP Planning Area, 2011

Area	Visits	Days
Canyon Rims Recreation Area	94,927	32,099
Colorado Riverway Special Recreation Management Area (SRMA)		
Corona Arch	37,000	9,250
Goldbar Campground	12,873	24,566
Kings Bottom Campground	4,932	9,412
Moonflower Campground	3,631	6,929
Williams Bottom Campground	6,340	12,099
JC Park Campground	1,854	3,538
Labyrinth/Gemini SRMA	413,774	309,780
Sand Flats Recreation Area (Porcupine Rim Trail)	25,000	12,500
South Moab SRMA-Dispersed	115,885	75,553
Indian Creek SRMA	87,420	73,111
Totals	**803,636**	**568,837**

To use this data in economic impact modeling, it is necessary to parse the visits into market segments, and apply expenditure estimates for each market segment. The best data for this purpose comes from a program originally developed by the USFS, the National Visitor Use Monitoring (NVUM) program, which also has been applied to some BLM management areas, including the Moab Field Office. The surveys conducted in the NVUM program include gathering data on visit types and visitor expenditures. NVUM data are available for local and non-local day trips and overnight trips, for different types of recreational activities, on a per-party per-trip basis, broken down by different types of expenditures. Party size data are available.

NVUM data for this analysis include the NVUM report for the Moab Field Office survey (BLM 2007), and additional detailed data provided to the Moab Field Office. The assumptions and manipulations used in applying this data to the MLP recreation economic contributions IMPLAN analysis are:

- All visitation to the MLP planning area is assumed to be Moab-based in terms of spending profiles and IMPLAN modeling.

- The breakdown of visits by market segment (day vs. overnight, local vs. non-local, lodging vs. camping) and expenditure profiles are based on the 2007 NVUM survey for the Moab Field Office, as follows:
  - Local (<50 miles): 18.4 %
  - Non-local camping: 32.4 %
  - Non-local lodging: 49.2 %
- Party size data from the NVUM survey are used for adjustments to provide consistency between the BLM RMIS person-based visitation data and NVUM party-based expenditure data.
- Expenditures for each market segment are applied to the adjusted visitation data by market segment.
- The NVUM expenditure data, in 2006 dollars (the NVUM survey year), is updated to 2012 dollars using IMPLAN's dollar-year adjustment parameters.

Table 5-10, Table 5-11, and Table 5-12 show the results of the IMPLAN analysis for each market segment.

Table 5-10. Economic Impacts of MLP BLM Public Land Recreation, Day Use Market Segment, 2011

Type of Impact	Employment (jobs)	Labor Income	Value Added	Economic Output
Direct Impact	16.2	$626,775	$1,046,176	$1,302,342
Indirect Impact	1.0	$34,327	$58,930	$105,052
Induced Impact	2.2	$71,006	$149,042	$236,012
Total Impact	19.4	$732,107	$1,254,148	$1,643,405

Table 5-11. Economic Impacts of MLP BLM Public Land Recreation, Non-Local Camping Market Segment, 2011

Type of Impact	Employment (jobs)	Labor Income	Value Added	Economic Output
Direct Impact	84.0	$3,903,827	$6,566,006	$6,847,238
Indirect Impact	3.7	$133,824	$247,095	$426,764
Induced Impact	13.0	$413,120	$864,969	$1,372,675
Total Impact	100.7	$4,450,770	$7,678,070	$8,646,677

Table 5-12. Economic Impacts of MLP BLM Public Land Recreation, Non-Local Lodging Market Segment, 2011

Type of Impact	Employment (jobs)	Labor Income	Value Added	Economic Output
Direct Impact	655.9	$16,753,244	$27,555,188	$46,440,450
Indirect Impact	64.1	$2,221,352	$4,031,874	$7,216,056
Induced Impact	61.0	$1,940,455	$4,062,719	$6,447,538
Total Impact	781.0	$20,915,051	$35,649,782	$60,104,045

The tables above show that the economic impacts of recreational visitor to BLM lands who are staying overnight in the area are significantly larger than the economic impacts of recreational day use, which is predominantly by local residents. This is because: a) there are significantly more overnight users (camping or lodging, totaling 81.6 percent of parties) than day users (18.2 percent of parties), and b) those who stay overnight have higher expenditures. The economic impacts of recreationists who use local lodging are significantly higher than the impacts of those who camp, largely due to the higher cost of a night in lodging versus a camping site, and the additional expenditures (e.g., restaurant meals) of most lodgers compared to most campers.

It is important to note that not all of these economic impacts, particularly for the camping and lodging segments, should be attributed to BLM public lands only. Visitors to BLM sites in the socioeconomic study area often visit other attractions such as national parks on the same trip. Of the parties surveyed in the NVUM study, 68 percent indicated that the BLM site where they were interviewed was their primary trip purpose. Thus, some of the surveyed BLM visitors had other primary trip purposes, and probably some whose primary purpose was visiting BLM public lands had additional (secondary) purposes.

5.3 LIVESTOCK GRAZING

Grazing is an important use of BLM public lands in both the Moab and Monticello Field Offices. Forage on BLM land is important to many ranchers in the socioeconomic study area. Grazing on this forage puts weight on calves and sustains producing heifers. Forage on BLM public lands may be the only forage available to some ranchers during some parts of the year. In addition to its economic benefits for local ranchers and the local economy, grazing on BLM public lands has important social and cultural significance. Some ranching families have been using these lands for generations, and these lands help support a ranching culture that is a key part of the social fabric of study area communities. While the economy and culture of ranching has a less prominent role today than in years past, its historic and continuing cultural significance is clear to many in the region.

At present, BLM does not anticipate large impacts on livestock grazing due to MLP decisions. This is because: a) forage within the planning area is limited, so the area does not support large numbers of livestock; and b) large-scale incompatibilities between oil, gas, and potash development and grazing are not expected (in other words, large losses in the forage base or access to that forage are not anticipated).

If the MLP management alternatives, once developed, appear to present the possibility of significant impacts on livestock grazing, BLM will analyze the socioeconomic aspects of any such impacts. This is done through the following process:

- Determine the numerical reduction in animal unit months (AUMs) of forage in each alternative.
- Calculate the value of production attributable to an AUM of forage using agricultural production statistics and known ratios for the conversion of AUMs into marketable calf body mass.
- Multiply the numerical reduction in AUMs by the value of production per AUM.
- Use the IMPLAN model to determine the impact of the total reduction in value on jobs, income, and other economic indicators.

5.4 LANDS AND REALTY

The lands and realty program of BLM is a support program to all other resources and resource uses. The mission of the lands and realty program is to manage BLM public lands in support of the goals and objectives of other resource programs, provide for uses of public lands in accordance with applicable laws

and regulations while protecting sensitive resources, and to improve management of public lands through land tenure adjustments. The primary responsibilities of the lands and realty program include:

- Land tenure adjustments – Sales, exchanges, and purchases to dispose of or acquire land or interests in land.
- Withdrawals – Reserving public land for a certain use by removing it from the operation of one or more of the public land laws.
- Land Use Authorizations – ROWs, communication sites, corridors, leases, and permits.

BLM lands and realty actions and policies can have important socioeconomic effects. Land disposals, ROWs, leases, and permits allow for economic activity and may further the economic development of communities within the socioeconomic study area or serve other important social purposes. Withdrawals and acquisitions may be pursued to protect important resources of economic or social significance to the public. Lands and realty actions also have important implications to public finance. Leases of BLM land and federal mineral estate produce revenue for the government. Disposals and acquisitions affect property taxes paid to local government by private property owners and PILTs paid by the Federal Government to local government.

The MLP planning action is not expected to have major impacts to land tenure adjustments or withdrawals inside or outside of the planning area. If the management alternatives do have notable implications for these programs, they will receive further attention in the impact analysis phase.

The current planning action could result in or impact various land use authorizations. Mineral leases are expected; however, these leases are managed through the minerals program rather than the lands and realty program. In support of mineral leasing, new ROWs and permits may be established for well pads, potash mine sites, roads, etc. Mineral leasing could also impact other existing or potential future land use authorizations.

One type of land use authorization that could be impacted is commercial filming permits. Grand and San Juan counties have been featured in numerous feature films and commercials, as well in a large variety of commercial still photographs, whether for calendars, catalogues or photography for sale. At least 48 full-length feature films have been shot all or in part in the Moab area alone, ranging from Stagecoach in 1939 to the recent 127 Hours and John Carter. Any regular television viewer is likely to see a commercial filmed with a Moab-area backdrop on an ongoing basis. Increased oil and gas drilling and especially potash development that require large evaporation ponds could render some portions of the planning area unsuitable for the scenic backgrounds sought out by most commercial filming and photography in the area.

Filming in the socioeconomic study area takes place on BLM lands, but also on private, state and National Park Service-managed lands. As firms generally do not disclose spending by location, but only overall spending, the closest approximation of BLM's contribution is the proportion of filming days that occurred on BLM relative to other locales. In 2010, the latest year for which full data is available, commercial filming and still photography recorded 263 days of shooting in the Moab area, resulting in expenditures of $12 million. (Filming tends to produce a higher level of economic benefits than still photography, but data is unavailable to separate the spending cited above into these two categories). Moab BLM billing records indicate 76 days of shooting on BLM-managed lands, or 28.9 per cent of the total. Applying this percentage to overall spending, BLM's contribution is $3,468,000. To the extent that average spending per day on BLM was higher or lower than on other locales, BLM's relative contribution would have been higher or lower. Based on the IMPLAN model, the economic impact of this spending is 98.5 jobs, $1.2 million in labor income, $4.3 million in total economic output, and $143,000 in state and local tax revenues (BLM 2012).

The amount of filming that takes place within the MLP planning area, or has this area as a back-drop, is unknown. Therefore, the portion of the economic impacts that is attributable to BLM public lands in the MLP planning area is not known. In addition, neither the economic impacts of filming on BLM public lands in the Monticello Field Office generally, nor within that Field Office's portion of the MLP planning area specifically, are known.

5.5 NONMARKET VALUES

In addition to the economic benefits described in previous sections, it is important to also consider non-market values associated with BLM activities in Grand and San Juan counties. Unlike gasoline or employee wages, these values either do not have a market or (in the case of property values) do have a market but are difficult to quantify. Nevertheless, such values are important to consider because they help tell the entire economic "story." Despite the difficulties associated with measurement of these values, it is well-accepted that the natural and cultural resources of an area, and the open space the area may provide, can have a dollar value. For example, it is common for real estate investors to pay more for view lots or for property adjacent to open space, or for people to make financial donations to help protect old-growth forests, endangered species, or other sensitive resources.

There are many types of nonmarket values. Three are considered here: the economic benefits to local communities from the amenity values provided by open space and scenic landscapes; the economic benefits to individuals such as the unpriced value recreationists experience; and ecosystem service values, which refers to the ways that healthy ecosystems support, enable, or protect human activity. Each is considered in turn below.

5.5.1 Economic Benefits to Local Economies

There is a body of evidence suggesting that "natural amenities" such as scenery, access to recreation, and the presence of protected areas (such as designated wildernesses or other forms of protection) have positive economic benefits for communities possessing such amenities. A study by Headwaters Economics (2007) summarizes much of the available research and reaches several conclusions:

- Retirees are attracted to areas which possess high levels of natural amenities.
- Entrepreneurs and employees who are not dependent on a particular workplace location ("cyber-commuters") are attracted to areas that possess high levels of natural amenities.
- A positive relationship exists between environmental protection and in-migration, retaining businesses and attracting new businesses.
- There is no evidence to suggest that protection of public lands is detrimental to local economies.

The above conclusions are reinforced by several other comprehensive studies, including those by the Sonoran Institute (2004) and the Wilderness Society (2007). A study of second home ownership in central Colorado (Venturoni, Long and Perdue 2005), while not addressing protected public lands, concludes that access to scenery and recreation are prime motivators behind second home ownership in the areas studied. This paper further concludes that the second home ownership phenomenon, although not without its negative impacts, is an important economic engine in job creation and income generation. Data from the U.S. Bureau of Labor Statistics reinforces the importance of second home owners to local economies, particularly in terms of spending (Francese 2003).

These conclusions are relevant to the socioeconomic study area, and particularly to Grand County, as it is characterized by high levels of second-home ownership. For example, the Economic Research Service (ERS) of the U.S. Department of Agriculture (USDA) uses a "natural amenities index" to classify rural

areas as to their relative degree of natural amenities possession. Using this index, ERS has found that communities with a high level of natural amenities are the most successful in attracting retirees and second home owners from the "Baby Boom" generation (USDA ERS 2009). On a scale of 1-7, ERS computed the Grand County Index as 4, indicating a relatively high level of natural amenities (USDA ERS 2004).

As discussed in Section 3.4, Grand County has a high percentage of homes that are for seasonal, recreational, or occasional use, compared to the state. This is indicative of a high rate of second home ownership in the county. It is also generally recognized that Moab's real estate market has attracted a significant number of second home owners: "Grand County's landscape and moderate climate make it very appealing to out-of-area investors. Consequently, the local housing market has experienced increased external market demand for second/seasonal homes, retirement homes, and general investment properties" (RPI Consulting 2010).

It is likely that the owners of second homes are choosing to build in and near Moab because of the scenic beauty and recreation potential. This would be consistent with a study of second home ownership sponsored by local county governments in central Colorado. This study found that scenery was cited by 95% of second home owners, and recreation opportunities (where hiking and skiing were the most mentioned activities) was cited by 91% as being important amenities driving the choice of locale (Venturoni, Long, and Purdue 2005). These two qualities, recreation opportunities and scenery, are clearly abundant in lands managed by Moab BLM, making it reasonable to assume that these factors are driving second home ownership trends in Grand County, as well.

During scoping for the 2008 Moab RMP planning process, several respondents indicated that access to these types of amenities was an important value in the planning area. As discussed earlier, open spaces can serve as attractants for retirees, second home owners, and "location-free" entrepreneurs and employees. Migration of these groups often has a positive (upwards) impacts on property values, as well as income and employment (Sonoran Institute 2004; Headwaters Economics 2007; Venturoni, Long and Perdue 2005; Francese 2003).

The above studies, among others, document the enhancement value of open space, including protected lands, on property values. Numerous studies have demonstrated that homes and properties located close to open space are more valuable relative to properties located further away, holding all else constant. This relationship varies based on the various characteristics (type, size, location, etc.) of open space resources, including the quality of views provided by the open space near a property. Open space can indirectly affect property tax revenues realized by local jurisdictions through the effect that open spaces have on property value assessments.

The central Colorado study cited above came up with several conclusions that may be applicable to Grand County:

- Spending on second home construction and subsequent spending by owners for goods and services accounted for over 38% of all jobs in the counties studied. Although the Colorado counties have a higher percentage of second home properties (over 60% of all housing units), the study clearly indicates that there are economic benefits to local communities from second homes.
- Resident spending of non-local income (dividends, interest, rent) accounted for about 16% of all jobs in the four counties studied. This type of income is closely linked to the type of wealthy households that tend to retire in amenity-rich, resort type communities. Again, Grand County may be moving in this direction.

Grand County also accrues certain fiscal benefits from both second home owners and retirees relocating to the county. Non-resident property owners pay property taxes at roughly double the rate of resident property owners. Non-resident property owners (and retirees) are often less dependent on costly county services, especially education.

There is, however, a potential downside to the above. As demand for second homes increase, especially in areas with relatively little land available for development (such as in Grand County), housing prices can rise dramatically. This phenomenon decreases the supply of affordable housing for both full-time residents and for the workers needed to support the second home economy (Venturoni, Long and Purdue 2005). This creates difficulties for communities wishing to diversify their economic base, become less-dependent on tourism, and meet the basic needs of the community with respect to affordable housing and education. A 2009 study done for Grand County and the City of Moab concluded that external demand for retirement and vacation properties, as well as investment properties, was a factor in increasing housing costs beyond what the typical county resident could afford (Interlocal Housing Task Force and Rural Community Assistance Corporation [RCAC] 2009).

5.5.2 Economic Benefits to Individuals

Many of the BLM Public Land Uses and Values subsections above address *market* values associated with these uses. These market values of BLM public lands and federal mineral estate are relatively easy to understand and assess. Commodities produced through use of BLM public lands (such as oil and gas, other minerals, livestock, timber, electricity from renewable energy projects, etc.) have a price in the marketplace that can be easily determined. Economic methods are readily available for measuring the flow of income and employment resulting from the production of commodities; e.g., production of electricity from renewable energy projects. A renewable energy development EIS presumes a certain number of wind turbines or solar panels developed over a specified period of time and constructed and operated by a workforce that can be estimated reasonably well. Using economic impact models, economists can then work "upstream" to estimate the purchases that renewable energy developers and operators will make from other firms, and work "downstream" to estimate how much their employees' wages will contribute to other businesses throughout the local economy.

The term *nonmarket values* refers to the benefits individuals attribute to experiences of the environment or uses of natural and cultural resources that do not involve market transactions and therefore lack prices. Examples include the benefits received from wildlife viewing, hiking in a wilderness, or hunting for recreation. Nevertheless, such values are important to consider because they help tell the entire economic story. Estimates of nonmarket values supplement estimates of income generated from commodity uses to provide a more complete picture of the economic implications of proposed resource management decisions.

To follow the example above, if renewable energy development represents one use, other uses may involve managing for some combination of habitat conservation and recreation. While many economic values associated with renewable energy development may be readily quantified, many economic values of conservation and recreation are harder to assess. Herds of elk do not pay user fees to graze on the public lands. Visiting fishermen, hunters, and climbers may spend money on motels and restaurants, but for the most part recreation on BLM-managed lands comes free or at a nominal charge. Thus, many of the values of maintaining lands for conservation and recreation are never measured in the market economy. We find it hard to put a dollar number on those values, but we know the correct answer is not "zero."

BLM is increasingly asked to consider these nonmarket values; in effect, to replace that "zero" with a more useful number for planning and analysis purposes.[6]

Clearly, it is often useful for BLM planning purposes to evaluate the market expenditures associated with activities on BLM public lands (e.g., spending by recreationists, mineral development expenditures) or the market value of products taken from BLM lands such as timber and minerals. Economic models can then be used to estimate the total economic activity generated by these expenditures or production values.

It may also be useful to address the additional nonmarket economic values derived from BLM public lands. In some cases these values can be calculated if appropriate information is available. In other cases this is not possible, but it may be helpful to discuss these values qualitatively or to provide examples of these values in analogous situations.

While there are difficulties associated with measurement of nonmarket values, it is well-accepted that the natural and cultural resources of an area and the open space the area may provide can have dollar values. For example, it is common for people to make financial donations to help protect old-growth forests, endangered species, or other sensitive resources. It is also common for real estate investors to pay more for view lots or property adjacent to open space. A recent study done for the USFWS found significantly increased valuation for properties located in close proximity to USFWS wildlife refuges, which by definition provide open spaces for wildlife and wildlife-dependent recreationists (Taylor, Liu, and Hamilton 2012).

In examining nonmarket values, economists often distinguish between "use values" and "non-use values." *Use value* refers to the benefits an individual derives from some direct experience or activity, such as climbing a spectacular peak, hunting, or wildlife viewing. In contrast, *non-use value* refers to the utility or psychological benefit some people derive from the existence of some environmental condition that may never be directly experienced: an unspoiled Grand Canyon or the continued presence of an endangered species.

Economists measure nonmarket use values by estimating the "consumer surplus" associated with these activities. Consumer surplus is defined as the maximum dollar amount, above any actual payments made, that a consumer would be willing to pay to enjoy a good or service. For instance, hikers pay a market price for gasoline used to reach a trail, but pay nothing to use the trail. Any amount that a recreationist would be willing to pay to use this otherwise free resource represents the nonmarket consumer surplus value of that resource to that consumer. There are many techniques for measuring this nonmarket use value. One common way is to collect data on variations in what recreationists do pay (gasoline, hotels, restaurants, entry fees, guides or outfitters, etc.); economists then use quantitative techniques to impute the additional willingness to pay that constitutes consumer surplus.

Nonmarket use values have been studied extensively for a wide variety of recreation "goods." To help the reader understand the potential nonmarket value of some of the planning area's natural and cultural resources, examples of a range of typical nonmarket use values—consumer surplus values—for recreation activities are summarized in Table 5-13, adapted from a recent Oregon State University report (Rosenberger 2011). This report summarizes the findings from 353 studies (totaling 2,703 different value estimates) covering the U.S. and Canada from 1958–2006, and separates the studies by region. This data is revealing, in that it indicates that visitors may be getting great value for their recreation activities in the socioeconomic study area, and may be more willing as a result to visit here and continue to contribute their spending to the local economy.

6 *BLM has recently issued guidance on considering nonmarket values: Instruction Memorandum No. 2010-061, Guidance on Estimating Nonmarket Environmental Values, February 16, 2010 (BLM 2010). This discussion draws on that guidance.*

Table 5-13. Recreation Consumer Surplus Values per Person per Day by Activity and Region (2010 $)

Activity	Western U.S.			Total (U.S. and Canada)		
	N	Mean	SE	N	Mean	SE
Backpacking	2	$39.85	15.1	38	$13.33	2.2
Bicycling	---	---	---	19	$42.67	5.6
Camping	58	$21.68	3.0	80	$19.98	2.4
Freshwater Fishing	302	$81.81	4.4	809	$61.21	2.2
Saltwater Fishing	40	$143.46	18.4	123	$109.39	10.2
Nonmotorized Boating	45	$112.12	18.0	85	$107.36	12.8
Beach	20	$57.81	15.7	68	$58.98	8.1
Hiking	70	$55.54	7.5	86	$60.63	7.9
Big Game Hunting	171	$78.91	5.0	459	$69.69	2.8
Small Game Hunting	34	$72.94	14.8	70	$52.51	8.3
Waterfowl Hunting	31	$58.10	10.4	130	$48.88	4.0
Motorized Boating	20	$48.55	20.3	75	$40.27	6.7
Mountain Biking	15	$180.67	36.2	16	$172.95	34.7
Off-road Vehicle	6	$42.02	5.7	13	$35.64	4.0
Picnicking	8	$19.06	1.9	19	$20.70	4.1
Rock Climbing	6	$34.63	4.0	14	$60.52	18.5
Sightseeing	12	$44.28	11.9	22	$45.94	9.8
Swimming	8	$28.88	7.2	14	$26.24	4.7
Wildlife Viewing	91	$63.99	6.3	324	$48.72	2.8
General Recreation	83	$31.97	4.2	146	$47.73	5.5
Other Recreation	64	$33.25	6.5	93	$34.51	4.9
Total	**1086**	**$69.34**	**2.3**	**2703**	**$59.60**	**1.3**

N: number of estimates on an activity reported across the literature
Mean: Mean consumer surplus per visitor-day for that activity in 2010 dollars
SE: standard error of the mean, with larger values relative to the mean indicating larger response variability
Source: Rosenberger 2011.

By applying the range of values in Table 5-13 to recreational usage figures (visitor days), or a range from specific individual studies that are most comparable to the planning area, an estimate of the recreation-related non-market use value, the consumer surplus, can be derived for the planning area. The resulting figure represents the total nonmarket use value recreationists derive from these activities, or alternatively, can be seen as the total additional amount recreationists would be willing to pay for the related recreation activities if a fee for participation were required. Those who are accustomed to free access and use of public land tend to forget that it represents a recreation opportunity and experience for which many would be willing to pay.[7] This type of calculation must be done very carefully, with great attention to the reliability of the recreational usage numbers and the validity of the consumer surplus values derived from the literature. The results must also be carefully interpreted, as consumer surplus estimates are not directly comparable to estimates of income derived from commodity uses (BLM 2010). Nonmarket use value calculations will be considered for relevancy in the economic impact analysis phase of the RMP revision process, and undertaken if useful to decision making and if possible with available data.

[7] *This observation is not meant to suggest that such fees should be charged. There are many philosophical and practical issues associated with charging fees for recreational use of public land.*

With respect to non-use values, economists differentiate various types, including option values and existence values. Option value represents the benefits from having natural or cultural resources available for future use, while existence value reflects the benefits derived from knowing these resources simply exist. Evidence for the existence of these non-use values is ample. Local, state and national taxpayers support a large variety of conservation and protection programs (e.g., National Park Service, state parks, local parks and parkways, open space initiatives, etc.) through their tax dollars—programs that are very popular but support many resources that many taxpayers will never visit. A large number of non-profits are devoted to a wide variety of conservation and wildlife-related causes; many if not most donors to these groups derive no direct benefit from their contributions. Based on Internal Revenue Service (IRS) filings, Giving USA reported charitable contributions by individuals, foundations, and corporations totaled $298.42 billion in 2011, of which $7.81 billion went to the "environment/animals" sector (Giving USA 2012). Examples of individual organizations with substantial contributions include the World Wildlife Fund with over $221 million in contributions from all sources in 2009 (World Wildlife Fund [WWF] 2009). The Nature Conservancy, with over 1,000,000 members, primarily in the U.S., received over $665 million in contributions (The Nature Conservancy [TNC] 2009). While this generalized evidence of non-use values is clear, estimating non-use values for specific resources is difficult and often controversial. BLM guidance recommends that use values be emphasized rather than non-use values (BLM 2010).

5.5.3 Economic Benefits from Ecosystem Services

Nonmarket values of open space and well-managed natural resources also include a broad range of human benefits resulting from healthy ecosystem conditions and functions. These benefits include potable water from groundwater recharge, flood control from intact wetlands, and carbon sequestration from healthy forests and certain agricultural lands. These human benefits from ecosystems are known as "ecosystem services" (Ruhl et al. 2007). Ecosystem services are receiving increasing attention from economists. As with the nonmarket values discussed above, there are many techniques available for estimating the dollar value of these ecosystem services.[8] It may be useful in the planning process to further consider the economic value of maintaining or improving the functional benefits of ecosystems.

The importance of ecosystem services was recently highlighted in a report drafted by the President's Council of Advisors on Science and Technology (PCAST). This report states:

> *Ecosystems and the biodiversity they embody constitute "environmental capital" on which human well-being heavily depends. The "ecosystem services" that flow from this capital include formation of soil and renewal of its fertility, management of flows of fresh water, maintenance of the composition of the atmosphere, pollination of flowers and crops, control of the distribution and abundance of pests and pathogens, production of fish and game in unmanaged and lightly managed ecosystems, aesthetic and recreational values from pristine landscapes, maintenance of the "genetic library" of global biodiversity as a source of future insights and innovations benefitting humankind, and important contributions to keeping climatic conditions in the range to which human society and current ecosystems are adapted (PCAST 2011).*

The report goes on to recommend that Federal agencies with responsibilities relating to ecosystems and their services should be tasked with improving their capabilities to develop valuations for the ecosystem services affected by their decision-making and factoring the results into analyses that inform their major planning and management decisions.

8 *The ecosystem services framework actually encompasses the amenity, recreational, and other values discussed above. For purposes of this brief discussion, the emphasis is on the additional functional benefits ecosystems provide.*

The value of open space as a natural system is receiving increased world-wide attention. Both private firms and governmental entities are discovering that it can be less costly to protect these kinds of resources than to correct damage that may result from not considering these resources. A commonly cited example is the value of protecting municipal watersheds, which may be less costly than treating polluted water sources. A recent article in TIME magazine summarizes some efforts and issues in valuing (and paying for) ecosystem services (Walsh 2011). A recent study, done under auspices of the United Nations Environment Program, provides a comprehensive discussion of the economic value of ecosystem services and biodiversity (The Economics of Ecosystems and Biodiversity [TEEB] 2010).

5.6 TRIBAL USES

The United States has a unique legal relationship with Indian tribal governments as set forth in the Constitution of the United States, treaties, statutes, Presidential EOs, and court decisions. The United States recognizes the right of Indian tribes to self-government and supports tribal sovereignty and self-determination. As domestic nations, Indian tribes exercise inherent sovereign powers over their members and territory. Federally recognized tribes may have interests in public lands as traditional tribal territories and many retain pre-existing rights reserved in treaties, EOs, agreements, and federal statutes.

Various tribes may be interested in access to and management of BLM public lands in the MLP planning area, having lived, hunted, foraged, and practiced their religious and cultural traditions across the broader region for centuries. Section 3.6 provides a list of tribes and bands that BLM initially identified as potential stakeholders and invited to participate in the scoping process.

Whether Indian tribes in the region have any specific interests with respect to the MLP planning area is not clear. However, consultation through the years has demonstrated a wide range of tribal interests are present on various BLM lands in the two counties of the socioeconomic study area. These include concerns about potential impacts to resources associated with practices like gathering medicinal plants or Native foods, and other natural products; access to traditional hunting and ceremonial areas; the availability of water and healthy plant and animal populations; as well as potential impacts and threats to Native American archeological sites, sacred sites, and traditional cultural properties (TCPs). Individual tribal members are known to visit certain petroglyph sites, presumably for ceremonial purposes. It is likely that other locations are being utilized for modern purposes (ceremonial, plant gathering, etc.) that BLM is not aware of since there are many places of importance to the tribes, including TCPs, sacred sites, and others.

Use of the MLP planning area by Native Americans may occur from individuals and groups located throughout the two counties, the two reservations that overlap the counties, and reservations and populations beyond the socioeconomic study area. According to the 2010 Census, 381 Native Americans live in Grand County. It is assumed that most live in the city of Moab and Spanish Valley, with some living in the unincorporated areas of the county. Also according to the 2010 Census, San Juan County has 7,431 Native Americans. Most live on the Navajo Nation but some live in other communities and unincorporated areas of the county.

The Uintah and Ouray Reservation comprises approximately 200,000 acres (8 percent) of Grand County, in the county's northwest corner. The Reservation covers a large portion of western Uintah and eastern Duchesne counties, and totals approximately 4.5 million acres. Interactions between tribes on the Uintah and Ouray Reservation and the MLP planning area are probably few. The distance between the areas is significant, and there is no road in Grand County that connects to roads on the Reservation.

The Navajo Nation Reservation comprises 1.2 million acres (24 percent) of San Juan County. The entire Reservation also includes land in Arizona and New Mexico and totals nearly 14 million acres.

Interactions between the Navajo Nation and the MLP planning area are probably few given the distance between the Navajo Nation and the planning area.

CHAPTER 6—CONCLUSIONS

This Socioeconomic Baseline Report gathers information on social and economic conditions and the values associated with uses of BLM public lands for a defined socioeconomic study area (Grand and San Juan counties, Utah). The report focuses on information that is most relevant to the scope of the current BLM planning effort for development of the MLP. This information will be useful for social and economic impact analysis of the management alternatives that will be considered in the impacts analysis phase of the planning process, and will be supplemented with additional data and information as needed at that time.

The socioeconomic study area has many significant economic and social conditions that affect the uses and values of BLM public lands and mineral estate in the MLP planning area. The two counties of the study area are considerably different both demographically and economically.

Some basic but important characteristics of the socioeconomic study area are as follows:

- A large majority of the land in the socioeconomic study area is federally owned (72 percent overall). BLM manages the largest amount of land (49 percent), followed by tribal ownership (20 percent), all other federal agencies (16 percent), the State of Utah (9 percent) and private ownership (7 percent).
- The socioeconomic study area had a 2010 Census population of over 23,971, with 9,225 located in Grand County and 14,746 located in San Juan County.
- The socioeconomic study area is very sparsely populated, with a few small population centers. The population density is 2.1 persons per square mile, compared to figures of 33.6 for the state and 87.4 for the nation.
- The socioeconomic study area is located at considerable distance from any large urban areas.
- The history of the socioeconomic study area is primarily a story of the native Indian cultures, settlement by Mormon pioneers, agricultural use, development of mineral resources, and recent influxes of residents and tourists attracted by the beauty and recreational resources of the region.

Some important demographic and social conditions and trends in the socioeconomic study area include the following:

- The study area as a whole grew from 16,300 persons in 1970 to 23,971 persons in 2010, a gain of 7,671 persons, or 47 percent.
- From 1970 to 1980, both counties grew significantly. This largely reflects an upsurge in mineral exploration and development during the 1970s. In the 1980s, San Juan County's population held steady, but Grand County's population (and the population of Moab) dropped significantly. This is attributed to the collapse of the uranium mining industry in the 1980s. Both counties (and Moab) grew in the 1990s. In the 2000s, Grand County had stronger growth than San Juan County—9 percent across the decade compared to 2 percent.
- The GOPB projects modest amounts of growth to 2020 and to 2030 in both counties and in all the sub-county geographies for which the state makes projections. At present, no foreseeable changes are likely to increase the growth rates in the study area to rates similar to the fastest growing communities in the state.
- Housing growth in the socioeconomic study area in the 2000s was actually stronger than population growth. This reflects the attractiveness of the study area to second home owners.
- The components of population change in the 2000s varied considerably. Natural change (births over deaths) was much larger in San Juan County. Grand County had modest net migration from

both domestic and international immigrants to the county. San Juan County had substantial *negative* net migration, led by domestic *out-migration*.

- The Grand County population is predominantly White—89 percent. The proportion of all minorities (i.e., all persons except non-Hispanic Whites) in Grand County is 15.9 percent. This is a smaller percentage of minorities than for the state as a whole, and much smaller than for the nation. In San Juan County, the percentage of Whites is much lower—45.8 percent. Minorities, particularly American Indians, make up 56.1 percent of the county's population.
- The age profile in Grand County is generally older than in San Juan County. The median age in Grand County, 40.5 years, is considerably greater than in San Juan County, 30.0 years.
- A very high proportion (compared to Utah and the nation) of the population of San Juan County speaks a language other than English at home.
- The median family income in Grand County is over $10,000 lower than that of Utah, and the median family income in San Juan County is nearly $20,000 lower than that of Utah. Factors contributing to these differences include the rural nature of the study area, lower education levels, the younger population profile of San Juan County, high minority and reservation populations in San Juan County, and probably other factors.
- Grand County has a significantly higher percentage of multi-unit housing structures than San Juan County, but a significantly lower percentage than the state. Both counties have significantly higher percentages of mobile homes than the state.
- The average household sizes for both owner- and renter-occupied units in Grand County were considerably lower than the corresponding figures for San Juan County and the state. Low household sizes are typical of areas where the population of adults is skewed toward younger (pre-child-raising) and older (post-child-raising) cohorts.
- County and local governments in the socioeconomic study area provide a wide range of public services.
- Many types of stakeholders to BLM public lands exist. At a high level, key types of stakeholders include Habitat and Resource Conservation Stakeholders, Recreation Stakeholders, Mineral Development and Production Stakeholders, and Visual Resource Stakeholders. These categories are not mutually exclusive; many specific individuals or organizations have multiple interests and have views that place them in more than one stakeholder category.
- None of the identified places in Grand County meet the thresholds to qualify as a potential EJ population. A number of places in San Juan County have minority populations and/or populations in poverty that may qualify as EJ populations. These places are primarily smaller communities. All but Blanding are located at considerable distance from the MLP planning area. These communities have been flagged for further consideration in the impacts analysis phase of the planning process.

Some important economic conditions and trends in the socioeconomic study area include the following:

- Unemployment rates in the two counties generally mirrored state and national trends from December 2008 to December 2011. In Grand County, the rate has been about 2 to 4 percentage points higher than the statewide rate, which peaked at just over 8 percent in early 2009. The Grand County rate peaked later, at about 11.5 percent in mid-2011. Rates in San Juan County were at essentially the same level (approximately 8 percent) in December 2008 as in Grand County, but rose to over 13 percent in late 2009 and stayed at or near that level until mid-2011, when the rates began to come down.
- Based on employment, the largest industries based in Grand County in 2009 were *Accommodation and Food Services* (1,458 jobs, or 21.8 percent of all jobs), *Government* (14.0 percent), and *Retail Trade* (13.6 percent). The largest industries in San Juan County in 2009 were *Government* (1,706 jobs, or 26.8 percent of all jobs), *Farming* (11.2 percent), and

Accommodation and Food Services (10.8 percent). *Mining* (all types) comprised 2.0 percent of jobs in Grand County and 5.9 percent of jobs in San Juan County.

- From 2001 to 2009, the industries experiencing the greatest numerical growth in jobs in Grand County were *Real Estate Rental and Leasing* (193 jobs added), *Accommodation and Food Services* (144 jobs added), and *Retail Trade* (133 jobs added). The San Juan County industries experiencing the greatest numerical growth in jobs in this period were *Farming* (435 jobs added), *Health Care and Social Assistance* (116 jobs added), and a near-tie between *Administrative and Waste Services* (109 jobs added) and *Real Estate Rental and Leasing* (108 jobs added). The *Mining* industry had the 5th largest number of jobs added, with 102 new jobs.
- Based on earnings, the three largest industries in Grand County in 2009 were the same as the three largest industries by number of jobs, but the relative rankings and sizes were different. *Government* was the largest industry by earnings, with $50.4 million in earnings, or 26.2 percent of all earnings in the county. *Accommodation and Food Services* was the 2nd largest (17.8 percent), and *Retail Trade* was the 3rd largest (11.5 percent). In San Juan County in 2009, by far the largest industry by earnings was *Government*, with $80.5 million in earnings, or 42.8 percent of all earnings. The 2nd largest, at $25.3 million (13.5 percent of earnings) was *Mining.* The 3rd largest was *Health Care and Social Assistance* (9.6 percent), with *Accommodation and Food Services* close behind (8.8 percent).
- In terms of earnings growth, in Grand County, *Accommodation and Food Services* had the largest numerical gain in earnings from 2001 to 2009 ($9.8 million), followed by *Government* ($8.4 million) and *Health Care and Social Assistance* ($4.7 million). In San Juan County, the largest numerical increases in earnings from 2001 to 2010 were in *Government* ($6.5 million), *Mining* ($5.7 million), and *Health Care and Social Assistance* ($3.8 million).
- The average annual wage in Grand County in 2010 was $27,562. In San Juan County, the average annual wage in 2010 was $31,680. These figures compare to an average annual wage in Utah of $40,641. It is typical for wages in rural counties to be lower than the state average, which includes large populations in high-wage urban areas.
- The highest average wages in Grand County in 2010 were in the *Natural Resources and Mining* sector (this sector is a combination of Mining and other natural resource industries) at $59,935, followed by *Federal Government* ($50,351), and *State Government* ($45,889). The highest average wages in San Juan County in 2010 were in the same industries: *Natural Resources and Mining* ($56, 857), *Federal Government* ($44,529), and *State Government* ($35,284).
- From 1970 to 2009, the percentage of total personal income in Grand County from labor earnings declined from 85 percent to 53 percent, and in San Juan County from 70 percent to 56 percent. These trends generally correspond to national trends, reflecting the aging U.S. population, who rely more on non-labor income than working persons.
- In Grand County in 2009 the dividends, interest, and rent component of non-labor income was significantly larger than the transfer payments component. In San Juan County, the pattern was reversed, with transfer payments being almost twice as large as dividends, interest, and rent. This is probably due to two main factors. One is the older population profile, including retirees, of Grand County—older persons tend to have more assets that provide dividends, interest, and rent. The second is the large American Indian population of San Juan County, both on and off the reservation. This population tends to receive more government assistance than non-minority populations. Income maintenance benefits ("welfare") totaled 21 percent of non-labor income in San Juan County and 5 percent in Grand County.
- Analysis of LQs for industries in Grand County in 2009 shows that the following industries were most important to the economic base (bringing in outside income): *Construction*; *Retail Trade*; *Real Estate Rental and Leasing*; *Arts, Entertainment, and Recreation*; *Accommodation and Food Services*; and *Government*. These industries had both high LQs and a large share (over 5 percent) of the county's employment or earnings. Industries with similar characteristics in San Juan County were *Farming*; *Mining*; *Accommodation and Food Services*; and *Government*.

- Analysis of local government revenue data shows that in Grand County in 2010, tourism-related revenues made up 14.5 percent of total revenues, while natural resources-related revenues made up 3.9 percent. In San Juan County in 2010, this pattern was essentially reversed: tourism-related revenues made up 2.0 percent of total revenues, while natural resources-related revenues made up 10.5 percent.
- Management of BLM-administered land may affect state and local expenditures for maintenance of roads, law enforcement and emergency response services, and other services.

The biological and physical characteristics of decision area surface lands and BLM-managed federal mineral estate in the planning area, coupled with social and economic conditions and trends within the socioeconomic study area (e.g., mining industry trends, local recreation demand, broader tourism patterns), together strongly affect the many uses and values of BLM public resources. Particularly notable aspects of those uses and values include:

- The potash resources of the socioeconomic study area are relatively unique. The Intrepid mine near Moab is one of three locations for potash production in Utah, which is one of only three states in the nation that produce potash.
- The Intrepid potash mine currently employs 52 persons. For the 2011 tax year, Intrepid paid Grand County a total of $782,972 in property taxes. For 2012, San Juan County levied $370,285 in property taxes on the Intrepid operation. It paid no federal mineral royalties as it does not operate on federally owned minerals. Utah has no severance tax for potash.
- Applications for permits to drill oil and gas wells in the two counties decreased significantly after 2008, and had not recovered to 2008 levels as of 2011. Over this same period, oil production declined substantially in Grand County and increased somewhat in San Juan County. Gas production decreased in both counties.
- As of late 2011, there were 15 producing oil and gas wells on federal minerals in the MLP planning area. These wells constituted 2.3 percent of all wells in the two counties and 4.4 percent of all wells on federal minerals. Based on these ratios and assuming equal production rates between the 15 MLP wells and all wells, the 15 MLP wells are responsible for $19,744 in distributions of federal mineral revenues to Grand County and $43,394 in distributions to San Juan County. Further, these wells produced estimated severance tax revenues to the state of $87,645; conservation fee revenues to the state of $8,475; and property taxes to the two counties totaling $130,030.
- Estimates of employment and income effects of the development (drilling and completion) and production phases for oil and gas wells are possible using basic assumptions on development costs and production values along with the IMPLAN economic impact model. A range of estimates for the economic impacts of drilling one well are provided in the report. Economic impacts of both phases will be addressed further in the impacts analysis phase of the planning process.
- In general, visitation at major natural resource sites (e.g., national parks) in the socioeconomic study area was relatively constant or increased through the period from 2005 to 2010. This indicates that visitation to major natural resource-based attractions provides a relatively recession-proof base of economic activity for the study area.
- Based on BLM data, estimated recreational visitation to BLM-administered lands in the MLP planning area in 2011 totaled 803,636 visits, or 568,837 visitor days.
- The economic impacts of this level of recreation use were estimated using market segment and visitor expenditure data from a NVUM study of the Moab Field Office, and the IMPLAN model. The day use market segment for visitation to BLM MLP lands generated an estimated 19 jobs and $0.7 million in labor income. The non-local camping market segment generated 101 jobs and $4.4 million in labor income. The non-local lodging market segment generated 781 jobs and $20.9 million in labor income. Not all of these economic impacts, particularly for the camping

and lodging segments, should be attributed to BLM public lands only. Visitors to BLM sites in the socioeconomic study area often visit other attractions such as national parks on the same trip.

- Livestock grazing is an important use of BLM public lands in both counties. However, grazing use of public lands in the MLP planning area is limited; therefore, socioeconomic impacts from actions under the MLP alternatives are likely to be small.
- Socioeconomic impacts of the MLP alternatives to the BLM lands and realty program are likely to be limited. One activity that could be impacted is commercial filming permits. This activity is economically important; across the Moab Field Office in 2010, it generated an estimated 98 jobs and $1.2 million in labor income.
- BLM public lands in the MLP planning area undoubtedly have nonmarket values that, while difficult to quantify, are important to recognize in making planning decisions about BLM public lands management.
- Tribal uses of BLM lands in the MLP planning area exist and are important to recognize in planning.

The various factors and characteristics noted above are key drivers that affect management of BLM public resources. Many additional factors addressed in this Socioeconomic Baseline Report also impact use and management of these resources. Analysis of the MLP management alternatives will need to take into account these many considerations in order to assess the potential social and economic impacts of the alternatives.

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APPENDIX A—DEFINITIONS OF LABOR AND NON-LABOR INCOME

Personal Income – Income received from all sources, including income received from participation in production as well as from government and business transfer payments. It is the sum of compensation of employees (received), supplements to wages and salaries, proprietors' income with inventory valuation adjustment and capital consumption adjustment (CCAdj), rental income of persons with CCAdj, personal income receipts on assets, and personal current transfer receipts, less contributions for government social insurance.

Labor Income

Labor Earnings / Net Earnings – Earnings by place of work is the sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income. Net earnings by place of residence is earnings by place of work less contributions for government social insurance, plus an adjustment to convert earnings by place of work to a place of residence basis.

Non-Labor Income

Dividends, Interest, and Rent – Personal dividend income, personal interest income, and rental income of persons with capital consumption adjustment, sometimes referred to as "investment income" or "property income."

Dividends: This component of personal income consists of the payments in cash or other assets, excluding the corporation's own stock, made by corporations located in the United States or abroad to persons who are U.S. residents. It excludes that portion of dividends paid by regulated investment companies (mutual funds) related to capital gains distributions.

Interest: This component of personal income is the interest income (monetary and imputed) of persons from all sources.

Rent: Rental income is the net income of persons from the rental of real property except for the income of persons primarily engaged in the real estate business; the imputed net rental income of the owner-occupants of nonfarm dwellings; and the royalties received from patents, copyrights, and the right to natural resources.

Transfer Payments (Personal Current Transfer Receipts) – This component of personal income is payments to persons for which no current services are performed. It consists of payments to individuals and to nonprofit institutions by federal, state, and local governments and by businesses. Government payments to individuals includes retirement and disability insurance benefits, medical benefits (mainly Medicare and Medicaid), income maintenance benefits, unemployment insurance compensation, veterans' benefits, and federal education and training assistance. Government payments to nonprofit institutions exclude payments by the federal government for work under research and development contracts. Business payments to persons consists primarily of liability payments for personal injury and of corporate gifts to nonprofit institutions.

Income Maintenance – Income Maintenance Payments consists largely of supplemental security income payments, family assistance, food stamp payments, and other assistance payments, including general assistance.

Unemployment Insurance Compensation – Unemployment insurance compensation includes state unemployment compensation, unemployment compensation of federal civilian employees, unemployment compensation of railroad employees, unemployment compensation of veterans, and trade adjustment allowances to workers who are unemployed because of adverse economic effects of international trade arrangements.

Retirement and Other – Retirement and other consists of retirement and disability insurance benefit payments, medical benefits, veterans benefit payments, federal education and training benefits, other government payments to individuals, government payments to nonprofit institutions, and business payments. However, disbursements received from private retirement programs (e.g., from 401k accounts) are not included. The BEA REIS data does not currently capture this source of income, which is an important source of income in counties with substantial populations of retired persons.

Source: BEA 2010b.